



# NEWSLETTER



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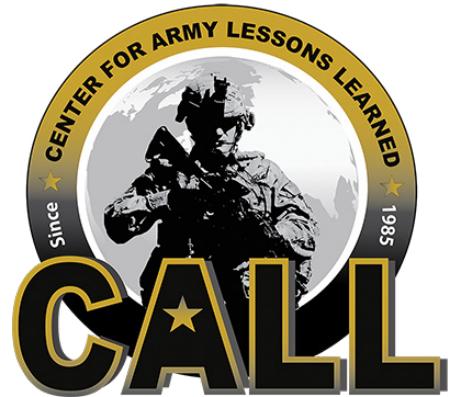


## **DECISIVE ACTION TRAINING ENVIRONMENT AT THE NATIONAL TRAINING CENTER, VOLUME IV**

**Lessons and Best Practices**

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# **Decisive Action Training Environment at the National Training Center, Volume IV**

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## **Introduction**

As a symbol of our Army's commitment to readiness, the National Training Center (NTC) assumes a comprehensive approach to training the force. Operations Group is dedicated to fostering training proficiency in our operating force while providing analytically derived, non-attributional feedback to the lessons learned community. Exercising multiple brigade combat teams that employ various platforms in a complex operational environment provides our Army with a unique capability to explore aspects of tactical mastery ahead of our competitors and potential adversaries.

While the challenges associated with the tactical employment of our brigade combat teams increased, the time and resources available to train have not. As such, a disciplined approach to sharing observations and contributing to the community of professionals to achieve efficiency in our innovation is paramount to honing our warfighting edge.

This volume is the fourth installment of the NTC decisive action series published by the Center for Army Lessons Learned. It represents our commitment to the ongoing professional discussion of how the Army, as the component responsible for imposing the will of the Nation upon our enemies, achieves decisive action by means of our core competencies.

The chapters in this publication are the product of highly trained, doctrinally proficient, and experienced observer-coach/trainers seeking to enhance our collective proficiency at joint combined arms operations. These chapters should generate professional dialogue and initiate a shared resolve to tackle complex tactical challenges.

The NTC and Operations Group endeavor to maintain the high standards for training in order to address emerging challenges and identify promising solutions — Lead, Train, Win.



## **Executive Summary**

The following articles in this newsletter reflect recent decisive action training environment issues observed at the National Training Center (NTC):

### **Chapter 1. Visualization of Command Post Functions, by LTC Rod Morgan**

A review of effective techniques seen at the NTC in the execution of command post functions. The author ties recommendations to standard operating procedures to assist the command post in defining the fight at echelon. The argument is tied to doctrine and makes salient points referencing common mistakes officers have in understanding doctrine.

### **Chapter 2. Analog vs. Digital Planning, by CPT Dustin Duncan**

The UH-60 assault helicopter community typically produces PowerPoint slides for air mission and aircrew briefs in support of air assault missions. The author describes how different units use digital or analog methods in a decisive action environment. He also describes how an assault company uses analog planning and briefing, saving time to focus on developing plans.

### **Chapter 3. Company-Level Mission Command and Command Post Functions at the National Training Center, by CPT Christopher M. Perrone**

Discussion of the company commander's role in developing and leading a command post. The author offers pragmatic techniques witnessed at the NTC.

### **Chapter 4. The Power of the Full Dress Rehearsal, by MAJ Jeffrey J. Barta**

Author's argument for a full dress rehearsal. The chapter includes examples of improving fire mission processing times, tempo, and lethality as a forcing function to ensure troop leading procedures (TLPs) are completed. Recommended solutions also provide for standard and time-constrained environments.

### **Chapter 5. Movement to Contact, by MAJ Mike Farmer**

The article provides examples of effective techniques witnessed at the NTC in executing the movement to contact. The author focuses on techniques to maximize principles of the offense through effective tasks and control measures.

### **Chapter 6. Strategies for Effective Time Management During the Planning Process, by CPT E. Jerome Hilliard, CPT Steven W. Krippel, and CPT Adam J. Moore**

This chapter outlines a training and doctrinal shortfall in the Army that shows a lack of effective time management. The authors provide an example of how to create a timeline at the battalion level and anecdotal discussion points of how a successful commander manages his time. The article also illustrates the importance of time management and discusses formal time-management doctrine that goes beyond the traditional "1/3-2/3s Rule."

### **Chapter 7. Sleep to Win and Other Habits of Highly Effective Company Commanders at NTC, by CPT Preston Robinson**

This chapter reviews current doctrine and scientific studies applicable to the role that sleep plays in memory, complex decision making, and critical thinking. Statistical analysis of company commander performance compared to sleep levels supports the assertion that leaders who make rest a priority perform at a higher cognitive level. Recommends a future study using wrist actigraphy to better identify best practices for leader endurance. **NOTE:** Actigraphy is a continuous measurement of activity or movement with the use of a small device called an actigraph. Often used to assess sleep-wake cycles over an extended period of time.

**Chapter 8. Preparing for Combat: Troop Leading Procedures for Field Artillery Batteries, by CPT James A. Silsby, III; CPT Adam D. Westbrook; and CPT Fredrick O. Nash**

A discussion about preparing units for combat and reducing anticipated challenges in battle through well developed TLPs. Emphasis on the TLP process in tactical standard operating procedures will reap benefits on the battlefields of the future.

**Chapter 9. How Can the Cavalry Squadron Increase the Responsiveness of Field Artillery Fires? by CPT Joseph Sanders**

This chapter offers the best practice of attaching the field artillery battery to the squadron. The author also identifies most damaging faults with attachment processes and offers solutions found to be effective at the NTC.

**Chapter 10. Occupy, Defend, and Support from the Brigade Support Area, by LTC Brent Coryell and CPT Shayne Heap**

A quality protection article outlining effective techniques for shaping the security environment and effectively securing the rear echelon support elements.

**Chapter 11. Engineer Support to the Offense: The Attack, by CPT Robert Howell**

This chapter reviews best practices witnessed at the NTC for organizing breach assets at the battalion level.

**Chapter 12. The Optimal Employment of the Forward Support Company in Decisive Action, by LTC Brent Coryell and CPT Christopher Devenport**

Best practices for task organizing and locating support assets on the battlefield. Discussion clarifies shortfalls in doctrine for empowering the forward support companies to execute disciplined initiative in supporting task-organized battalions and increases brigade situational awareness in sustaining combat power.

**Chapter 13. “Where’s My LOGCOP?” BCT S-4 vs. BSB SPO in Anticipating Requirements, by MAJ Matthew D. Meyer**

Discussion focuses on the commonly misunderstood roles of the brigade’s primary sustainment personnel and their actions in building situational awareness and generation of combat power. Includes a doctrinal review and best practices witnessed at NTC.

## Chapter 1

### Visualization of Command Post Functions

#### LTC Rod Morgan

Ideally, every unit that deploys to the National Training Center (NTC) will possess an updated and well-read command post standard operating procedure (CPSOP). Regrettably, the reality is that most units do not have a CPSOP, or, if they do, it is hidden on the new battle captain's computer or the operations sergeant major has the only hard copy and it is 10 years old. An unused or outdated CPSOP is the same as not having one at all — the unit faces a quandary in establishing who in the main command post (CP) does what and when, all the while trying to prepare for combat. Doctrine provides an interim solution, however: a half-dozen succinct principles identified as the CP functions (also known as the six tactical operations center [TOC] functions). These functions are an outstanding guideline for a unit to organize its warfighting functions (Wffs) and ultimately build a CPSOP. The intent of this chapter is to help the reader visualize what the CP functions look like in practice, and to empower executive officers (XOs) and battle captains as they train CP personnel. Experience shows that staffs that are familiar with these functions and consciously think through the principles behind them generally perform well under the pressures of a decisive action rotation.

The six command post functions are:<sup>1, 2</sup>

- Receive information
- Analyze information
- Submit recommendations to the commander
- Distribute information
- Integrate resources
- Synchronize resources

The CP functions describe the essence of what the CP must be able to do for the commander and the unit. What they do not do is give guidance on specifics of battle update brief formats, TOC rules, shift change briefing roles, or the location of the fire support officer (FSO) table in relation to the intelligence officer (S-2) table — the types of details captured in a CPSOP. Understanding how to perform the functions helps establish the details (function drives form).

The functions appear so simple, with only common-sense explanation, that one could easily gloss over them. However, failure on the reader's part to ask "What does that look like?" could translate into failure in future application. Observer-coach/trainers at the NTC have the opportunity to see these functions conducted by rotational training units. The lessons learned by these units serve as examples for the greater force to picture the CP functions in action. Few events can show the successes and failures of a CP like that of a subordinate unit in contact with special munitions. This chapter discusses the functions as they pertain to a main CP whose subordinate units have come into contact with a family of scatterable mines (FASCAM). This helps the reader visualize how a CP functions.

## Receive Information

It is important to note that while the six functions are “interrelated” and the “order in which these functions occur may vary at times,”<sup>3</sup> the functions have a hierarchy. The baseline of this hierarchy is to receive information. Much like the adage “an obstacle that is not overwatched is not an obstacle,” a CP that cannot or does not receive information is not a CP. There are a number of reasons that units fail in this lower echelon requirement.

Army Techniques Publication (ATP) 3-90.5 explains that a CP must receive messages, monitor the tactical situation, monitor locations of friendly units, update charts and maps, and maintain a journal. The first three of these duty descriptions have to do with how we pull in data. Unclear instructions about which report goes on which net, insufficient retransmission planning, and poor net discipline are common problems that prevent a unit from receiving information. Increasing distances between sender and receiver, as well as enemy contact, exacerbate the above issues.

It does not matter that a CP can receive messages if the message receiver does not update a chart with new information. Nor does it matter that the CP monitors the tactical situation if the staff does not maintain a journal. Finally, maps in a CP are relevant only if they are used to show the locations of units and events.

To put the above statements into perspective, consider the following statement by a radio and telephone operator (RTO) to a deployed CP team: “Charlie Company’s front line trace is NV11S287188.” While this hypothetical RTO has demonstrated his ability to monitor the friendly situation, this number is meaningless until and unless that RTO gives the grid perspective. In the military, this perspective is most commonly provided by showing the location on a map. This allows all personnel listening to the RTO to gain understanding of the report. Moreover, if Bravo Company’s updated location is not transferred to a map, or a common operational picture (COP), then the report is wasted breath by both the sender and the RTO (information not received). The situation becomes more complicated a couple of minutes later when Charlie Company identifies smoke in Debnum Pass.

## Analyze Information

The collection of WfF representatives arrayed to support the commander and his mission are what make up the CP. These staff representatives bring their expertise to planning and execution in the form of analysis. In terms of the six CP functions, doctrine describes “analyze information” as the ability to conduct the military decisionmaking process (MDMP) or orders drills, develop a timeline, consolidate reports, and conduct predictive analysis using collected data. Sub-functions are built on those described above to receive information. For example, MDMP, or even the rapid decision-making process, requires staff estimates, and staff estimates require information. The staff must understand what information is available, and what information they require. This knowledge helps to develop subordinate information requirements, and also helps in the development of relevant CP tracking charts (thus enabling reception of information).

To build on this scenario, Charlie Company’s report of smoke in Debnum Pass becomes more than a cumbersome “Attention in the TOC” announcement when the battle captain asks, “What kind of smoke?” He finds out that the smoke is purple in color, and appears to have come from a smoke grenade. The listening staff members analyze the report: “It’s a FASCAM in the pass.”

At this point “receive” and “analyze” become iterative between the CP and the subordinate.

**RTO:** “Do you have a good grid for that?”

**Commander, Company C:** “About three kilometers out from my last report.”

It is also at this point that staff members do what they get paid to do. The officer in charge (OIC) or noncommissioned officer in charge of the operations center puts people to work.

**XO:** “S-2, what is the enemy trying to do here? How does FASCAM support his plan?”

**FSO:** “What are the standard doctrinal dimensions of an artillery-delivered FASCAM?”

**Engineer:** “What do we have that can breach it, and where is it?”

The above discussion is not to be considered all inclusive, but instead serves to illustrate what an agile CP should do with information received. The continued discussion among staff members ultimately provides the commander with options.

### **Submit Recommendations to the Commander**

As a general rule, the commander fights forward with the tactical command post (TAC), and has control of the close fight. What the main CP provides is the depth of analysis from the full complement of the staff, not just the select few who travel with him. The recommendations that come from the staff afford the commander with options that he might not have seen previously.

To follow our example, the recommendation to the commander may sound similar to this:

“Sir, based on the analyzed size of the minefield in relation to the width of the pass, the current location of our mine clearing line charge (MICLIC), the last known enemy locations, and your intent to maintain momentum, I recommend that Charlie Company attempt to find and mark a bypass while our element with the MICLIC moves forward. If no bypass is found, Charlie Company can become the support-by-fire for suppress, obscure, secure, reduce, and assault.”

While the commander is not obligated to accept recommendations from the staff, recommendations are an obligation of the staff. If the commander chooses to accept what the staff proposes, then the directive, and its associated information, must then leave the CP.

### **Distribute Information**

This function serves to prompt the age-old question, “Who else needs to know?” While that phrase may seem cliché, the idea behind it drives the need for an information hub such as a CP. For example, might not our higher headquarters, sister battalion, or other subordinate units want to know of an artillery-delivered FASCAM in Debnum Pass?

Distribute information is two-fold:

The first aspect of distribute information occurs inside a CP. As discussed, it is the sharing of information between staff members outside of their own stovepipes to allow for analysis. The methods doctrine for internally distributing information include shift change, command, and information briefs. Not listed, but of note, are CP “two minute drills.” These allow the staff to provide running estimates in an open forum to prevent stovepiping and enable the OIC to fully understand the situation.

The second aspect of distributing information is that which occurs outside of the TOC. This includes report submissions, traffic flow, retransmission operations, relay operations, and publication of orders. All units need to know about the FASCAM, and they need the information while it is still relevant.

The external aspect of distributing information can take several forms. The distribution can be in the form of a Joint Capabilities Release chat message to all subordinates. It can also be the addition of a graphic symbol on the digital distributive COP. Outgoing radio messages and voice-over-internet-protocol calls also get the message out faster.

### **Integrate Resources**

ATP 3-90.5 does little to expand on integration beyond “coordinate the integration of all Wffs.”<sup>4</sup> Although integration of the Wffs is extremely important, it involves more than making sure that all staff members are included in the two-minute drill. Another key aspect of integration is referenced in CALL Newsletter 99-12, which states that the integrate resources function includes “receive and integrate engineer and combined arms attachments.”<sup>5</sup> For example, in the analyze information discussion, the battalion XO asked about the availability of breach assets and their location. While it is understandable that the XO is unaware of the exact capabilities of the engineers, it is extremely important that he understand their relationship to the battalion.

Task-organized units/resources bring high capability, but also a low understanding of the gaining unit’s systems and procedures. These resources require integration, and integration requires command and support relationships. CPs manage command and support relationships.

Had the battalion engineer answered the location portion of the XO’s question with, “Sir, we have an engineer section moving with Delta Company,” that officer would have technically been correct. However, the answer would have missed the mark and shown a lack of understanding for the correctness of published orders. The more precise answer would have been, “Sir, Delta Company has tactical control over the engineer section.” One answer describes a resource’s proximity to a subordinate unit. The other answer shows an understanding of who is in control of the engineers, as well as the implied proximity to Delta Company. Understanding this delineation is key for any staff that would attempt to bring the effects of multiple subordinate and task-organized resources together in an orderly fashion.

### **Synchronize Resources**

Just as receive information is the basic CP function, synchronize resources is the highest function of the six. Before going any further, it is important to define the words that make up the title of the function. While the common use of “synchronization” elicits thoughts of simultaneous action, the CP function (synchronization of resources) must speak to relevant order in time. For instance, within the main CP, some or all of the functions may be occurring simultaneously: information reception, distribution, and analysis, for example. However, more likely than not, information that is distributed does not correspond to information that is received simultaneously. The information that leaves the CP has likely been received, analyzed, and decided. Transitioning to look at the “resources” portion of the title opens the aperture a little.

While synchronization is temporal, resources are spatial. Resources, as noted in the integration discussion, can be listed as Wffs, subordinate units, and other CPs. Resources either provide something or achieve something. For instance, the MICLIC provides engineers with breach capability. The engineer section achieves the reduction task. Synchronization of resources is the coordinated relevant order of actions in time.

In terms of space and time, the CP ensures that Charlie Company, unable to find a bypass, establishes a support by fire that allows Delta Company to position the MICLIC appropriately. Similarly and simultaneously, while the main CP current operations personnel are consumed with Charlie Company's actions at the FASCAM, the plans section furiously develops a branch plan to the current operation.

There is another hidden aspect to synchronize resources, and that is the aspect of echelon. Battalions have more than one CP. Each of the alternate CPs performs the same CP functions as the main. However, one CP might focus more on the current operation, while one might center more on future operations. One CP may focus more on movement and maneuver, while another focuses on mission command. Additionally, the relevance of a certain CP may shift throughout the conduct of a battle.

For instance, while the resources of the main CP provide time-relevant reactions to the FASCAM in Debnam pass, the TAC sequences the fighting units and artillery, and focuses on the hard data of combat power and enemy battle damage assessment (BDA) in order to understand how to apply combat power. Similarly, the company trains command post (CTCP) tracks enemy BDA, but is interested in assessing fuel usage derived by unit movements, and ammunition expenditure by using enemy BDA. In the brigade support area, the field trains CP is gauging the need to change resupply routes and timings based on the closure of a major terrain pass. Also, while the TAC may weigh heavily on the receive and distribute information end of the spectrum and control the close fight, during consolidation, the CTCP may have the responsibility to rebuild combat power. However, like multiple companies attempting to breach without the guidance of the TAC, the independent labors of a battalion's CP flounder if not coordinated. One CP, most likely the main CP, must be responsible for synchronizing the efforts of the other CPs.

## **Conclusion**

The six CP functions provide the logical guidelines for a CP to follow for success. While they are commonly applied to the main CP, they are helpful to lead the efforts of all posts where mission command is applied. Whether or not a unit possesses a CPSOP, the CP functions are an outstanding, yet simple, guideline for providing control over a formation. The functions can occur in any order. However, there is a definite hierarchy that becomes apparent when comparing the first and the last function. Visualization of these functions in action allows leaders and staff to understand how the functions are to be implemented, and implementation of these functions is the dividing line between untrained and trained staffs.

## **Endnotes**

1. Army Techniques Publication (ATP) 3-90.5, *Combined Arms Battalion*, 05 FEB 2016, page 2-10.
2. The CP functions are not new. They first appeared in Center for Army Lessons Learned (CALL) Newsletter 95-7, *Tactical Operations Center (TOC)*, MAY 1995, as the “six basic TOC functions.” They were readdressed in CALL Newsletter 99-12, *Sidewinders’ Tactics, Techniques, and Procedures for Engineer Operations*, OCT 1999, as part of CPSOP development. Notably, that newsletter pointed out the relevance of the functions to all CPs, not just the main CP (commonly referred to as the TOC). Nine years later, the Army addressed the six functions in Field Manual 3-90.5, *Combined Arms Battalion*, 07 APR 2008, which was updated to ATP 3-90.5, *Combined Arms Battalion*, 05 FEB 2016.
3. CALL Newsletter 95-7, *Tactical Operations Center (TOC)*, MAY 1995.
4. ATP 3-90.5 (FM 3-90.5), *Combined Arms Battalion*, page 2-10.
5. CALL Newsletter 99-12, *Sidewinders’ Tactics, Techniques, and Procedures for Engineer Operations*, OCT 1999.



## **Chapter 2**

### **Analog vs. Digital Planning**

**CPT Dustin Duncan**

As the primary UH-60 assault helicopter company trainer at the National Training Center (NTC), I have observed assault companies struggle to plan air assault missions. Units often spend significant time developing lengthy PowerPoint briefs that consume hours of planning time. Each time there is a change to the operation, the organization must then update each slide. In an environment where most missions are received less than 48 hours from execution, this wastes valuable time and leads to substandard plans.

Improvements in technology in recent decades have led everyone, including our military units, to embrace the use of computers for planning purposes. Air assault companies typically develop presentations of 60 or more slides for air mission briefs (AMBs) and aircrew briefs (ABs). Our superior surveillance assets have created the ability to dominate the land and air in the counterinsurgency (COIN) fight. The enemy is afforded less freedom to maneuver across the battlefield in the COIN environment, which allows our forces more time to plan deliberate air assaults. In the COIN environment there are also fewer changes in the enemy's situation, so most air assaults have only minor changes, if any, during the planning process.

In the decisive action (DA) fight at the NTC against a near-peer adversary, the rotational training unit (RTU) does not dominate the air and ground, so aviation is not afforded the same freedom of maneuver typically enjoyed in the COIN fight. Information collection to define the enemy situation takes longer in the DA fight. In the decisive action training environment (DATE), the enemy possesses greater freedom to maneuver across the battlefield. This affords friendly forces less time to plan for deliberate operations and requires more changes during the planning process. The same mission briefs that take several hours to build must be updated with every change. The focus becomes updating slides instead of developing executable plans that consider contingencies and include rehearsals. Several units training at the NTC have had their planned air assault missions canceled by the air assault task force commander because of substantial delays due to last-minute changes and the resulting synchronization and coordination required. In these instances, the ground force commander typically chooses to execute assault via ground rather than wait for air assets.

One technique that allows units to overcome this challenge is the use of analog graphics (common operational picture [COP]) for planning and briefing the situation and execution sections of AMBs and ABs. One reason using an analog system is advantageous is that maneuver graphics can be changed and updated very quickly, especially if drawn with dry-erase markers. All the planners must do is erase a maneuver graphic and draw a new one. This allows more time to develop a good, executable plan with briefed and rehearsed contingencies.



**Figure 2-1. Aircrew briefing.**

In Figure 2-1, the aviation task force is conducting an aircrew brief for a battalion-level air assault of 309 Soldiers and sling-load operations in support of a brigade-level combined arms live fire exercise (CALFEX) at the NTC. The unit was notified less than 36 hours from execution and was still able to execute an initial planning conference, air mission coordination meeting, AMB, AB, and rehearsal. Throughout the planning process, the unit did not produce a single PowerPoint slide, but every brief was conducted to standard and the AMB incorporated every required document from Field Manual 3-99, *Airborne and Air Assault Operations*, 06 MAR 2015 (paragraph 9-35).

Many aviation organizations observed at the NTC resist conducting a battalion-level air assault if the mission is received with such a short planning and preparation timeline. This particular mission was the sixth air assault conducted by the same battalion during its rotation at the NTC and the unit had yet to produce a single slide for any of its briefs. Also notable, and frequently observed in the DATE, the unit received the mission less than 48 hours before execution for each air assault conducted. The unit briefed, rehearsed, and executed every mission to standard.



**Figure 2-2. Mission update.**

In Figure 2-2, the aircrews have repositioned to the supported ground force's tactical assembly area to execute an air assault in support of a brigade-level CALFEX. After landing, the crews received changes to the ground tactical plan, and subsequently changed the landing plan. The air mission commander updated the friendly maneuver graphics and routes on his map and used a checklist to brief the new plan to his flight crews. The crews were able to execute the mission and made the planned H-hour. The task force's ability to execute fluidly and effectively was the result of efficiencies built through continuously maintaining an accurate COP and the use of analog planning products.

Maintaining a current COP requires companies to pull updates from the battalion operations officer and intelligence officer, which in turn helps establish communication and coordination throughout the task force. Briefing from maps (rather than PowerPoint slides) has been successful for centuries, and we need to recognize that this is still an acceptable and effective means of briefing missions. Although the use of digital planning has its advantages, we need to understand that analog systems are also important, and may in fact work better and be more efficient under time-constrained conditions.

In a DA fight against a near-peer competitor, the friendly and enemy situations change often. Lift aviation organizations must remain flexible to best support the ground forces on the battlefield. Analog planning systems and briefings are proving better at leveraging standard operating procedures, battle drills, and the COP than the frequently used digital-replication systems. While counter to my COIN experiences from the past six years, it has been observed that RTUs employing this technique have significant success. Digital planning systems work better in some situations, but analog systems are proving to be more efficient for air assault planning and briefing in the DA fight at the NTC.



## **Chapter 3**

### **Company-Level Mission Command and Command Post Functions at the National Training Center**

#### **CPT Christopher M. Perrone**

“Mission command, as a warfighting function, assists commanders in balancing the art of command with the science of control, while emphasizing the human aspects of mission command. … The mission command warfighting function integrates the other warfighting functions (movement and maneuver, intelligence, fires, sustainment, and protection) into a coherent whole.”

Army Doctrine Reference Publication 6-0, *Mission Command* (page 1-4)

As the Army transitions focus from counterinsurgency to decisive action, infantry and armor companies, regardless of brigade combat team (BCT) type, are struggling to provide effective mission command under austere conditions at the National Training Center (NTC). This chapter attempts to highlight some of the key friction points that company commanders face and offer recommendations based on doctrine to better prepare company-level leaders as they deploy to NTC.

A critical component to providing successful mission command is the command post (CP). “Commanders arrange CP personnel and equipment to facilitate internal coordination, information sharing, and rapid decision making. They also ensure they have procedures to execute the operations process within the headquarters.” (Army Tactics, Techniques, and Procedures 5-0.1, *Commander and Staff Officer Guide*, page 3-8)

One of the most frequently asked questions revolves around what the CP should look like. Unlike the battalion and brigade CPs, there is no doctrinal template or equipment assigned by the modified table of organization and equipment (MTOE) that dictates the appearance of a company CP. As a result of sustained operations in Iraq and Afghanistan, most commanders envision a robust company CP with several computers, screens that can depict multiple unmanned aerial system feeds, large-scale maps, and multiple communications platforms all operating simultaneously. Many company commanders come to NTC and take the common “all or nothing approach.” The once massive CP is now relegated to the commander’s map and a notebook; however, there are other options to consider.

The type of BCT (whether armor, infantry, or Stryker) dictates what organic platforms and equipment are available. The CP must be rapidly deployable and able to provide effective mission command while both static and on the move. A vehicle’s specific capabilities, placement on the battlefield, and susceptibility to enemy contact must be considered. In a Stryker BCT or armor BCT, an infantry commander may designate his own vehicle or another vehicle such as the executive officer (XO) or fire support officer (FSO) vehicle to be the CP along with a rapidly deployable tent. A tank company commander may choose the organic M113 armored personnel carrier as it provides more room than a tank, and in theory, it would not take away critical combat power from the fight. In an infantry BCT, the CP may be a poncho, a tent, the commander’s high mobility multipurpose wheeled vehicle or a combination thereof. Regardless of the platform, the CP must be able to perform the required functions of receiving, disseminating, and reporting information to establish a shared understanding.

At NTC, the most successful company CPs are those that understand how the company's plan is nested in the battalion fight. To achieve this understanding, the CP must have both digital and analog means of battle tracking. While units tend to rely heavily on frequency modulation (FM) voice platforms, other assets that are available (depending on the MTOE and fielding timelines) may include high frequency, satellite communications, point-of-presence, Soldier network extension, Force XXI Battle Command Brigade and Below, and Joint Capabilities Release (JCR). These systems are excellent tools that allow for the rapid dissemination of information and mission-type orders.

Many of these systems are under-utilized due to lack of education and training, but time put into learning these systems is time well spent. In some instances, these systems are rendered inoperable due to lack of maintenance or enemy jamming. When these systems go down, it is absolutely essential to have a well-thought-out primary, alternate, contingency, and emergency (PACE) plan for communications and a backup analog common operating picture (COP) with graphic control measures for the commander to conduct the fight. Some key items that should be either displayed or readily available to the CP are listed in Figure 3-1. Additionally, these methods should be field-tested during home-station training to determine what is successful, and these methods must be codified in standard operating procedures (SOP).

#### **Analog Tools for Command Post Operations**

- Analog maps with graphic overlays
- Tracking charts (logistics, personnel, combat power, enemy and friendly battle damage assessment, etc.)
- Key timelines
- Key locations and grids (checkpoints, fires targets, reference points, casualty collection points, ambulance exchange points, decontamination sites, etc.)
- Company and battalion information requirements (commander's critical information requirements, essential elements of friendly information, priority information requirements, and friendly forces information requirements)
- Map markers
- Dry-erase markers
- Clear tape
- Unit icons
- Overlay sheets
- Protractors and rulers
- Extra maps of the same scale to rapidly disseminate information
- Organizing mechanism (trifold boards, aviator's log book, three-ring binders, etc.)

**Figure 3-1. A sample of analog tools for command post operations.**

Company commanders at NTC struggle to provide mission command while on the move. Mission command during the offense requires the same function to be performed, but the configuration is slightly different from static operations. CP duties may have to be split between key leaders, and functions must be performed out of vehicles because setting up tents is impractical. Often during offensive operations, the CP and key leader vehicles are placed in locations where communication is a challenge. When static, the establishment of long-range

antennas better supports long-range communications; however, if the forward elements have traveled a significant distance from the battalion, the ability to retransmit or switch to an alternate system (such as JCR) must be taken into consideration when planning. Also, without an effective PACE plan, the company is unable to send accurate reports to the battalion.

Some key questions to consider when creating the CPSOP include the following:

- Where should the commander or the CP be positioned?
- How should the duties be split between key leaders during the offense?
- What should the CP look like when mobile vs. static?
- What is the role of the CP when the commander is not there?
- If the commander is dismounted, will the CP still be able to properly battle-track, disseminate information, and send accurate reports to battalion?
- Will the CP be placed in the most effective location that allows for either FM or digital communications?

Regardless of the chosen configuration, the most successful units are those that have an established SOP and have rehearsed their plan during home-station training.

The decisive action environment is friction filled, and requires the help and full employment of everyone involved. A typical occurrence is to see an over-burdened company commander, without a working CP, trying to plan an operation or fight the current mission while simultaneously becoming inundated with menial tasks. The end result is usually an overwhelmed commander who issues a poorly developed operation order, fails to send accurate reports to battalion, and makes rushed or questionable decisions. The company commander does not have a full-time dedicated staff to assist with operations; however, there are some roles and duties that can be delegated to assist the commander as he maneuvers and fights the formation.

Generally, the more successful units have developed ways to minimize the weight on the company commander by incorporating everyone in the headquarters section into performing CP functions. In garrison, the company XO is generally well-practiced at coordinating sustainment efforts and is able to assume the role of commander in his absence. However, at the NTC, most company XOs continue to focus on sustainment and completely divorce themselves from the movement and maneuver warfighting function.

Some key tasks that the XO can perform to assist the commander and better enable him to assume command include the following:

- Being responsible for the CP.
- Being in charge of battle-tracking subordinate and adjacent units.
- Being placed in charge of a maneuver detachment.
- Assisting the first sergeant (1SG) with casualty evacuation (CASEVAC) and resupply operations.

Company 1SGs are responsible for CASEVAC; however, additional duties may include the following:

- Being positioned at the points of friction.
- Leading maneuver detachments.
- Being placed in charge of enablers.
- Due to position and experience, the 1SG may be the right choice to run the CP.

In addition to the company XO and 1SG, there are other options to consider. Some FSO primary duties involve either being collocated with the company commander or positioned with the main effort. Being in such close proximity allows the FSO and his team to augment the CP. The company fires net can increase situational awareness by acting as a dual reporting net. Also, in a period of low activity, the radio and telephone operators (RTOs) can split their responsibilities on the company net. This would enable other Soldiers such as the operations sergeant and the drivers to complete tasks such as digital and analog graphics production and position improvement.

The armorer is usually located at the brigade support area or with the combat trains CP, but could serve as the 1SG's driver to repair weapons closer to the fight. The senior medic can assist the CP as an RTO until medical-specific tasks require his attention. Ideally, the supply sergeant is located where he can best support the company, but also should assist the 1SG and XO with the coordination and execution of sustainment functions.

Providing effective mission command in a complex decisive action environment can be challenging, but with repetition and multi-echelon training at home station, the amount of friction can be greatly reduced. Training on both digital and analog platforms, using all equipment available, is absolutely essential and enhances the efficiency of any organization. Trial and error, coupled with honest feedback during field exercise after action reviews, results in the establishment of a quality CPSOP that is field tested. Once the functions of a CP and the science of command are understood, the commander's ability to master the art of command is achieved.

## Chapter 4

### The Power of the Full Dress Rehearsal

**MAJ Jeffrey J. Barta**

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Dating back to 1990, over 65 professional articles about rehearsals were published in the Center for Army Lessons Learned (CALL),<sup>1</sup> the Armor Magazine, and Cavalry and Armor Journal.<sup>2</sup> This critical step of the troop leading procedures is essential to mission success. During the past two years of transition to decisive action training exercises at the National Training Center (NTC), the importance of effective rehearsals is a lesson that continues to be relevant. Conducting a full dress combined arms rehearsal is the most powerful method to create shared understanding and prepares units for complex operations, while serving as an efficient use of time due to the concurrent subordinate rehearsals and pre-combat checks.

The operational environment in which the Army has fought in Iraq and Afghanistan tended to change the form of rehearsals that the current generation of leaders is comfortable employing. While units were spread across disparate outposts and bases, back brief rehearsals across digital or Integrated Tactical Network Environment (ITNE) systems became the primary means to prepare for operations. In a decisive action training environment, combined arms rehearsals are necessary and the opportunity exists to bring subordinates together in order to use a key leader or full dress on their combat platforms.

Effective rehearsals imprint a mental picture of the sequence of the operation's key actions and improve mutual understanding and coordination of subordinate and supporting leaders and units.

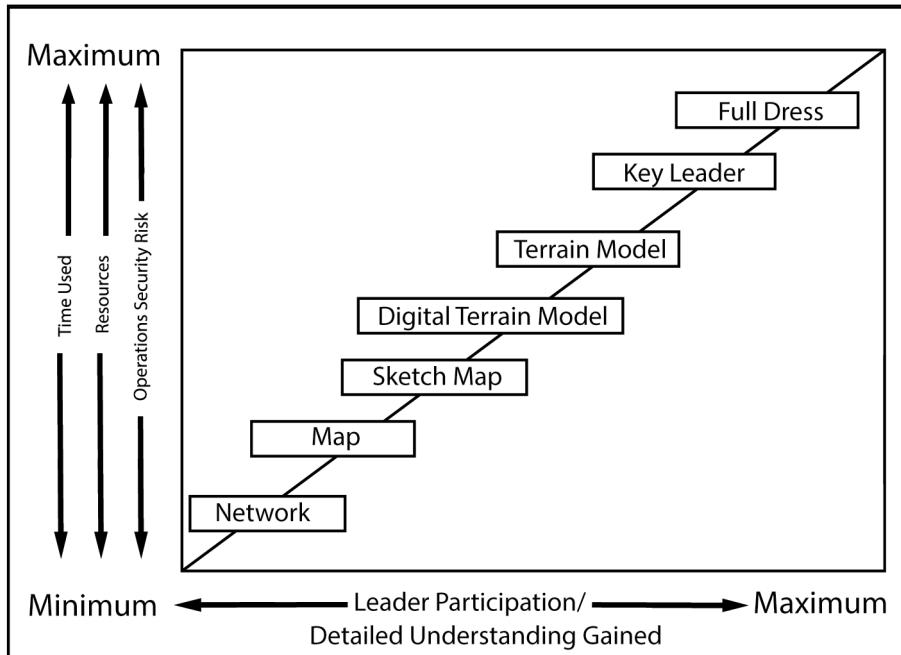
Army Doctrine Reference Publication 5-0, *The Operations Process*, 17 MAY 2012

Observations by observer-coach/trainers (OC/Ts) at the NTC show that terrain model combined arms rehearsals are the technique most frequently employed. Further observation illustrates that this type of rehearsal is actually a back brief with leaders standing on the terrain model as a platform to read back their portion of the script, and then exiting before the next participant enters the terrain model. Out of the 10 rotations during fiscal year (FY) 15 at the NTC, only seven full dress rehearsals were conducted at the brigade combat team (BCT) echelon. The division headquarters directed six of the seven rehearsals in preparation for BCT level live fire attacks. Units conducting full dress mounted rehearsals improved their tempo, synchronization, and lethality compared to missions in which they conducted terrain model or back brief rehearsals.

During a recent rotation, the training unit further improved the processing time of fire missions by an average of nearly 12 minutes and the tempo of a combined arms breach by over one hour after conducting a full dress combined arms rehearsal.<sup>3</sup> During live fire training, full dress rehearsals are an institutionally practiced method to prepare for complex training events. Common practice is for key leaders to conduct back briefs about their concept, and the collective unit conducts dry and/or blank fire, full dress rehearsals on the range where they execute. This process creates a shared understanding for all participating in a challenging event, as well as mitigates risk.

Rehearsing key actions before execution allows Soldiers to become familiar with the operation and translate the abstract ideas of the written plan into concrete action.

Field Manual 6-0, *Commander and Staff Organization and Operations* (Chapter 12),  
5 MAY 2014



**Figure 4-1. The direct relationship between the complexity of rehearsal techniques and the understanding that they produce.**

Concurrently, the full dress rehearsal drives participants to complete their precombat checks well prior to execution. These practices all align with the tenets of rehearsals described in FM 6-0<sup>4</sup> and the performance measures detailed in the Combined Arms Training Strategies (CATS), Task Number 71-8-5122, Perform a Rehearsal.<sup>5</sup> These practices should be performed with equal energy while preparing for a live fire training range or preparing for live, virtual, constructive, and operational missions.

The most powerful technique to employ full dress combined arms rehearsals is to choose a piece of terrain in the unit rear area with enough space to maneuver the rehearsal attendees. The selected terrain should mirror the terrain for the upcoming battle. Creating a small-scale area of operations allows units to see each other in time and space, as well as identify, and fix friction points. Smaller scale graphics should be produced specifically for the full force rehearsal and ideally distributed in conjunction with the operations order. The execution of the rehearsal also serves as a pre-combat check for all systems and tools such as the communications network, the fire control infrastructure, reconnaissance platforms, and sustainment processes. All participants are able to mount their combat platform and maneuver in space and time with their adjacent, forward, and rear units.

The direct fire plan can be validated while combat identification markings of friendly forces are verified. The integrated indirect-fire plan links is verified from the observers to the fires assets. All can understand the spatial relation of each echelon of aid stations and critical resupply elements. An important aspect of executing a full dress rehearsal is to induce friction and rehearse the planned branches, sequels, and contingencies. The induced elements of friction

should not become new war-gaming, but rather focus on the enemy courses of action (ECOA) and contingencies developed during the military decision making process (MDMP). The rehearsal is not the time for collaborative brainstorming, but rather the validation of shared understanding among the higher headquarters and subordinates, as well as the resolution of friction identified in the plan. Another counterintuitive benefit to a full dress or reduced forced combined arms rehearsal is that it saves time for subordinates. A full force rehearsal is able to create shared understanding across multiple warfighting functions simultaneously, reducing the requirement for pulling subordinate staff members away from their units for separate warfighting function rehearsals.



**Figure 4-2. An M-777 cannon crew conducts drills as part of a BCT full dress combined arms rehearsal at the NTC.**

In a time-constrained environment, terrain model or digital terrain model combined arms rehearsals are still relevant. To improve the outputs of a terrain model rehearsal, it needs to be structured and facilitated in a manner which takes it beyond a back brief. While conducting a back brief is an approved type of rehearsal and increases the understanding between the leader and subordinate, this type limits the collaboration between all participants. Placing all participants on the terrain model in relation to each other in time and space leads to greater collaboration and shared spatial understanding of their place on the battlefield. Similar to a full dress rehearsal, friction must be induced and contingencies practiced in order to identify potential challenges and ensure synchronization of all participants.



**Figure 4-3. Brigade leadership at the NTC conducts a terrain model rehearsal in preparation for a deliberate attack.**

The decisive action training environment at the NTC is complex and challenges units to fight against a near peer enemy force. Preparation for each mission using effective rehearsals is necessary to achieve success. While this may be the latest in a number of articles on the subject, the suggestions listed in this article offer techniques to gain the most value from this crucial part of the troop leading procedures.

#### **Endnotes**

1. Web search of indexed topics focused on rehearsal techniques through CALL (Center for Army Lessons Learned, 2015).
2. Web search of indexed articles focused on rehearsal techniques through past issues posted on the eARMOR webpage (Cavalry and Armor Journal, 2015).
3. Empirical data collected during a BCT Live Fire attack at the NTC observed by the author.
4. FM 6-0 change 1, *Commander and Staff Organization and Operations* (Headquarters, Department of the Army, May 11, 2014), Chapter 12.
5. CATS identify the performance standards for Army tasks. (Army Training Network, 2015)

## Chapter 5

### Movement to Contact

#### MAJ Mike Farmer

The movement to contact is categorized as an offensive task. It commonly takes the form of an approach march followed by a hasty attack transitioning to an exploitation, pursuit, or even a hasty defense when conditions are not favorable. This somewhat circular definition, in which all four of the offensive tasks have been used to describe the movement to contact, helps visualize it, but not understand it. When it is used and what it does are more easily defined than what it is, or looks like. By contrast, most practitioners agree with the fundamental steps of an attack. This is not the case, however, for the movement to contact; its approaches are as numerous as its uses, and it warrants an examination. This topic could be deemed less important if the very task did not feature as a mission essential task (MET) for many battalions and companies. The movement to contact is not trained at the same level as the attack, which is the basis for most unit live fires at all echelons. This chapter discusses what doctrine says and examines an approach to the planning and execution of the movement to contact in order to provide observer-coach/trainer (OC/T) insight on gaining contact and seizing the initiative in the decisive action training environment.

This is not the first discussion of the movement to contact in this type of forum. In Center for Army Lessons Learned (CALL) Newsletter 13-17, *Operations in the Decisive Action Training Environment at the JRTC, Volume III: Small Units and NCOs* (June 2013), CPT Stu Chapman presented an article, *Movement to Contact: A Lost Art?* This article provided a doctrinal underpinning and observations from a live-fire OC/T perspective. Many of the author's points are valid, but this chapter takes a different approach through a different interpretation of the doctrine.

This discussion first develops a working understanding of the movement to contact; secondly, it addresses the course of action (COA) development steps of the military decisionmaking process to highlight key nuances of planning a movement to contact. Thirdly, this chapter outlines how timely decisions and execution of maneuver and battle drills at the echelon level determine the success of the operation.

#### **Understanding the Movement to Contact**

From a common departure point, the discussion can progress. Foremost, the movement to contact is an offensive task. According to Field Manual (FM) 3-90-1, *Offense and Defense Volume 1*, it is "designed to develop the situation and to establish or regain contact." The manual expands on the purpose, stating, "The commander conducts a movement to contact when the enemy situation is vague or not specific enough to conduct an attack." (paragraph 1-4)

As stated above, it is clear when a movement to contact is used and what it is intended to achieve. The disparity remains in what it looks like, or how to conduct it. In this aspect, Army doctrine leaves room for interpretation. "Forces executing this task seek to make contact with the smallest friendly force feasible. A movement to contact may result in a meeting engagement. Once contact is made with an enemy force, the commander has five options: attack, defend, bypass, delay, or withdraw." (FM 3-90-1, paragraph 1-4)

To dissect that statement, a unit seeks to make contact with its smallest force feasible. This must be interpreted as the covering force or advance guard, and not merely the lead element of the main body. If that nuance is missed, then it compounds with further misinterpretation. The description continues, identifying a meeting engagement as a likely, and perfectly natural result. To define, "a meeting engagement is a combat action that occurs when a moving force,

incompletely deployed for battle, engages an enemy at an unexpected time and place. … In a meeting engagement the force that reacts first to the unexpected contact generally gains an advantage over its enemy. … No matter how the force makes contact, seizing the initiative is the overriding imperative.” (FM 3-90-1, paragraphs 2-3 and 2-4)

Unintentional divergence from the spirit of the outlined text often results in a small lead element of the main body making unexpected contact while incompletely deployed for battle, now seeking to seize the initiative above all else. If this accurately describes what is executed, it is less a movement to contact than it is a hasty frontal attack. This article asserts that a movement to contact requires an advance guard that can gain and maintain contact, the ability to disrupt and fix the enemy with direct or indirect fires, and a main body that can execute one of the forms of maneuver. Upon completion, the force follows through until the enemy’s main body is identified or the limit of advance is reached.

### **Planning the Movement to Contact**

Given the uncertain nature of the movement to contact, the question is how? The current battlefield is too fast, complex, and technical to mass effects of available combat power without detailed planning. Despite lacking information, the commander still must be able to conduct an attack at the moment of contact with the integration and synchronization of all enablers. In an attack, “the commander knows part of the enemy’s disposition. This knowledge enables the commander to better synchronize and employ combat power more effectively in an attack than in a movement to contact” (FM 3-90-1, paragraph 1-5). The movement to contact could perhaps more aptly be described as a “maneuver on contact” to correctly emphasize the transition that must occur. To do this, a most detailed plan is needed to reach a favorable outcome.

While the movement to contact is an enemy-oriented operation, a plan characterized by successive attacks to seize key terrain with branches and sequels to destroy enemy forces in their likely positions requires detailed planning to mass combat power and maneuver on contact. Accompanying this plan must be refined decision points for the main body to attack, defend, bypass, delay, or withdraw when contact is gained. Similar decision points must exist for the advance guard, but the decisive maneuver comes from the main body.

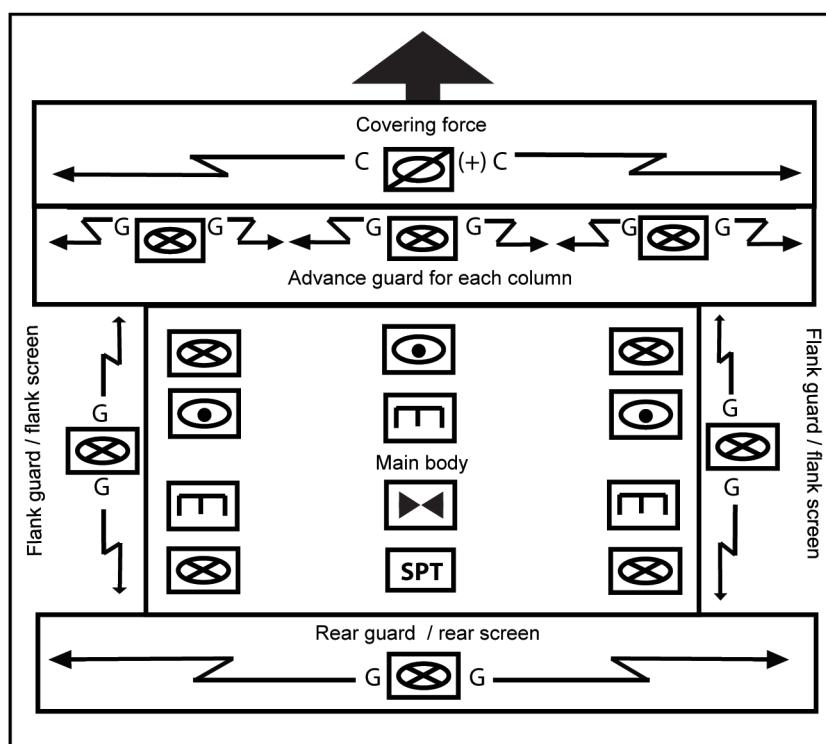
In an attack, “The commander maneuvers forces to advantageous positions before contact (and) contact with enemy forces before the decisive operation is deliberate, designed to shape the optimum situation for the decisive operation” (FM 3-90-1, paragraph 1-2). Why not in the movement to contact? Terrain analysis is conducted; situation and event templates are completed. These assessments should drive a plan to seize key terrain, prepare for an attack on likely enemy positions, and continue in this manner until contact is made by the advance guard, at which time the main body can maneuver as planned.

### **Course of Action Development**

Through the steps of COA development, a staff can develop a complete COA for a movement to contact.

- **Step One:** The staff analyzes relative combat power, and develops deductions about the comparison. Key to this step is an appreciation for available enemy systems, and how they may be employed (expanded on from step four of intelligence preparation of the battlefield). The ability to determine locations on the battlefield for suspected enemy positions by weapon type leads to the plotting of maximum engagement lines (MELs). The staff also considers the MELs as an extension of the modified combined obstacle overlay as “no-go terrain without condition setting.” Tied to the MEL is a probable line of contact.

- **Step Two:** Generate options; the maneuver corridors begin to form the unit's options. Maneuver corridors along the entire axis for the movement to contact can be identified, connecting them where they converge, leaving a roadmap of intersecting routes. Next, directions of attack from routes penetrating the MELs and intersecting with the suspected enemy locations can be added to support attacking an enemy force at each of those possible locations. Add a subsequent overlay for seizing dominating terrain across the axis and/or for terrain that supports attacks on the previously identified suspected enemy locations.
- **Step Three:** Array forces; the most significant nuance from other operations is the task organization of a covering force, advance guard, and main body. The focus must be the covering force and the advance guard. They are the forces that are arguably at the decisive point of a movement to contact. The front of the formation should not look like a point (misreading of smallest friendly force feasible), but a broad and shallow reconnaissance force able to make contact and develop the situation. The main body, then out of contact, is in a much better position to conduct a hasty attack to seize and retain the initiative, or deal a decisive blow.



**Figure 5-1. Force organized for a movement to contact.**

- **Step Four:** Develop a broad concept; the arrangement and execution of the commander's options as per doctrine of attack, defend, bypass, delay, or withdraw must be translated to the terrain. The execution of the most advantageous form of maneuver (given the situation) translates to the scheme of maneuver with subordinate unit task and purpose. A series of conditions-based tasks and purpose with supporting control measures makes the maneuver of forces and the integration and synchronization of assets possible.
- **Step Five:** Assign headquarters.
- **Step Six:** Develop a COA statement and sketch.

There is little difference from other operations, except the ability to capture branches and sequels tied to enemy locations and key terrain. For this, decision support products become essential. The end state of COA development often looks like a subway map with junctions and decision points where the unit can maneuver based on enemy contact and key terrain.

### **Executing the Movement to Contact**

In execution, intelligence collection and the actions of both the covering force and guard enable decisions by the commander on the axis of advance by the main body and the execution of a hasty attack by the main body. This is intuitive, and does not depart from how intelligence collection works for other offensive tasks such as an attack, but bears emphasis for the critical nature of the advance guard's ability to make contact across the unit's entire frontage and develop the enemy situation enough to transition to a hasty attack, which is nested with the imperative to gain the initiative. The nuance is that the initial contact is with the advance guard only, and the hasty attack comes from the main body. The error is when the advance guard conducts the hasty attack on a sizeable enemy force or the main body makes contact, devolving into meeting engagements in both instances.

The ability to rapidly execute a form of maneuver with the main body is enabled by planning, but ultimately requires the main body to transition to a combat formation, close with the enemy, and conduct the coordinated and synchronized tasks required for the form of maneuver chosen by the commander. This must be communicated on the move, which requires communication through the use of the contingency graphics developed during planning. Battle drills or playbooks must be understood at all echelons in order to rapidly coordinate maneuver. This may require one company to fix enemy forces in a certain location while a sister company secures a piece of key terrain and establishes a support by fire position in support of another company that attacks to envelop identified enemy forces. Once complete, the force continues the movement to contact if the location of the enemy main body is still unclear and the limit of advance has not yet been reached. This brief example follows the steps outlined in FM 3-90-1 of gain and maintain enemy contact, disrupt the enemy, fix the enemy, maneuver, follow through.

The movement to contact, while an offensive task, does not go as far as an on-order attack on an enemy and location to be determined, as this would remove the art of tactics by removing the decision of how, or even if, to attack. It is not a movement to establish a hasty defense securing key terrain, so that the unit may defend and then transition back into the defense, as this abdicates the ability to seize the initiative, and again does not allow the commander to make key decisions. It is, then, simply an operation to close with the enemy, and the logical prelude to all operations. To succeed, units must make contact with the smallest feasible force, ideally an advance guard, maintain contact, disrupt the enemy, then execute decisively with the main body through simultaneous or sequenced execution of the steps of fix the enemy, maneuver, and follow through. When understood and planned in detail, executed at a tempo the enemy cannot match, while massing all available combat power, a successful movement to contact is not only possible, but likely, despite all of the friction and unforeseen circumstances.

## Chapter 6

### Strategies for Effective Time Management During the Planning Process

**CPT E. Jerome Hilliard, CPT Steven W. Krippel, and CPT Adam J. Moore**

One of the greatest challenges battalions face while executing operations at the National Training Center (NTC) is proper time management. Given the high operational tempo, many battalion staffs fail to properly manage their available time for mission planning. The staffs that struggle the most are those that arrive at the NTC with incomplete or untested battalion standard operating procedures. This does not facilitate effective planning. These battalion staffs work to create products rather than plans, which accounts for requirements given by higher headquarters, enemy actions, light and weather effects, operational/logistical requirements, and planning steps. As a result, steps of the military decisionmaking process (MDMP) are repeated rather than being completed thoroughly during each step of the process.

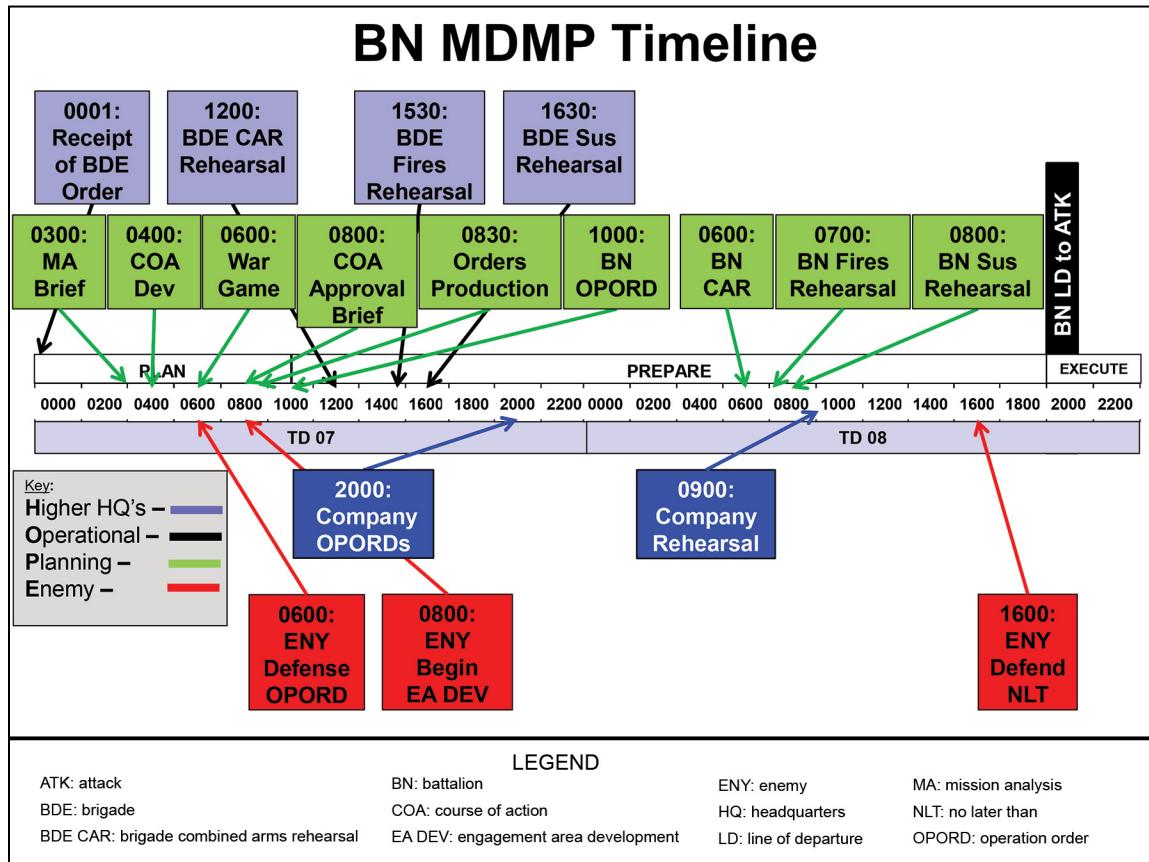
This inability to produce a timely operation order (OPORD) directly affects the companies' ability to conduct effective mission planning at their level, as they are unable to produce a completed plan or execute rehearsals to ensure shared understanding of the mission. This chapter illustrates how a battalion's mismanagement of time during orders publication affects lower echelons. The chapter also provides examples of time management techniques that create more time for troop leading procedures (TLPs) and facilitate issuance of orders.

Upon receipt of the brigade OPORD, the priority of the executive officer (XO) should be to develop a planning timeline utilizing backward planning, followed by prioritizing staff member requirements for each step of the MDMP while following a time management technique commonly known as the "1/3-2/3 Rule." This method divides the time available for planning with higher headquarters using 1/3 of the time, leaving the remaining 2/3 of the time to subordinate units.

During planning, the battalion XO must prioritize what needs to be accomplished and scale the level of detail in the staff's planning based on time available. A robust timeline should be created, posted, and distributed for staff members to balance their planning considerations. The timeline should incorporate considerations of higher headquarters' key times, operational requirements, planning and TLP times, enemy considerations, and light/weather data. This method (often referred to as the HOPE timeline; see Figure 6-1 on next page) quickly accounts for critical events and contributes to successful planning by increasing the visibility of overlapping events.

Recognizing that time is limited and the battalion staff may not be able to complete a thorough MDMP cycle, the focus needs to be on particular products to synchronize assets (situation and event templates, intelligence collection, fire support, decision support, and synchronization matrixes). Focusing on these key products, the battalion staff reduces the time to produce an OPORD and focuses the planning efforts to develop a course of action (COA) in synchronizing necessary assets that facilitate mission execution. The production of the situation and event templates allows the battalion staff to see the enemy in time and space, allowing battalion planners to develop courses of action with inputs from each warfighting function (Wff).

The most effective battalion staffs conduct their COA development steps as a group, with the operations planner taking the lead. This method allows all staff members to see how their Wff facilitates the operation and provides them with the required guidance to prepare their respective estimates. With an understanding of the battalion's COA, each staff member works to synchronize his enablers with the battalion's scheme of maneuver. The production of the intelligence collection matrix should support the development of the decision support matrix.



**Figure 6-1. HOPE timeline example.**

Additionally, the fire support matrix accounts for the timeliness of indirect fire assets to help shape the operation. With these products, the battalion planner can generate a synchronization or execution matrix that allows the battalion and company commanders to visualize their unit's role in the operation. The decision and synchronization matrices must be used at the battalion combined arms rehearsal (CAR) to ensure the plan is understood and synchronized. The battalion CAR should be deliberately planned and thoroughly prepared; otherwise, the CAR becomes nothing more than a COA analysis briefing.

Units often do not conduct rehearsals due to a short timeline before mission execution or conflicting brigade-level requirements. If a battalion CAR is conducted, it is often carried out during hours of limited visibility. A rehearsal executed under conditions of limited or no visibility is far less likely to help (and could even detract from) the unit's understanding of the operation. In this case, a poorly executed rehearsal is worse than not conducting one at all. Although it might be difficult to schedule the rehearsal at another time, executing it during daylight conditions would help the unit improve its understanding of the operation. A timeline that accounts for higher requirements such as the brigade CAR, operational requirements (logistical package or refueling operations), planning considerations (platoon rehearsals), enemy (reconnaissance [RECON] established), and light/weather data (sunset and end evening nautical twilight times) also helps leaders plan more efficiently.

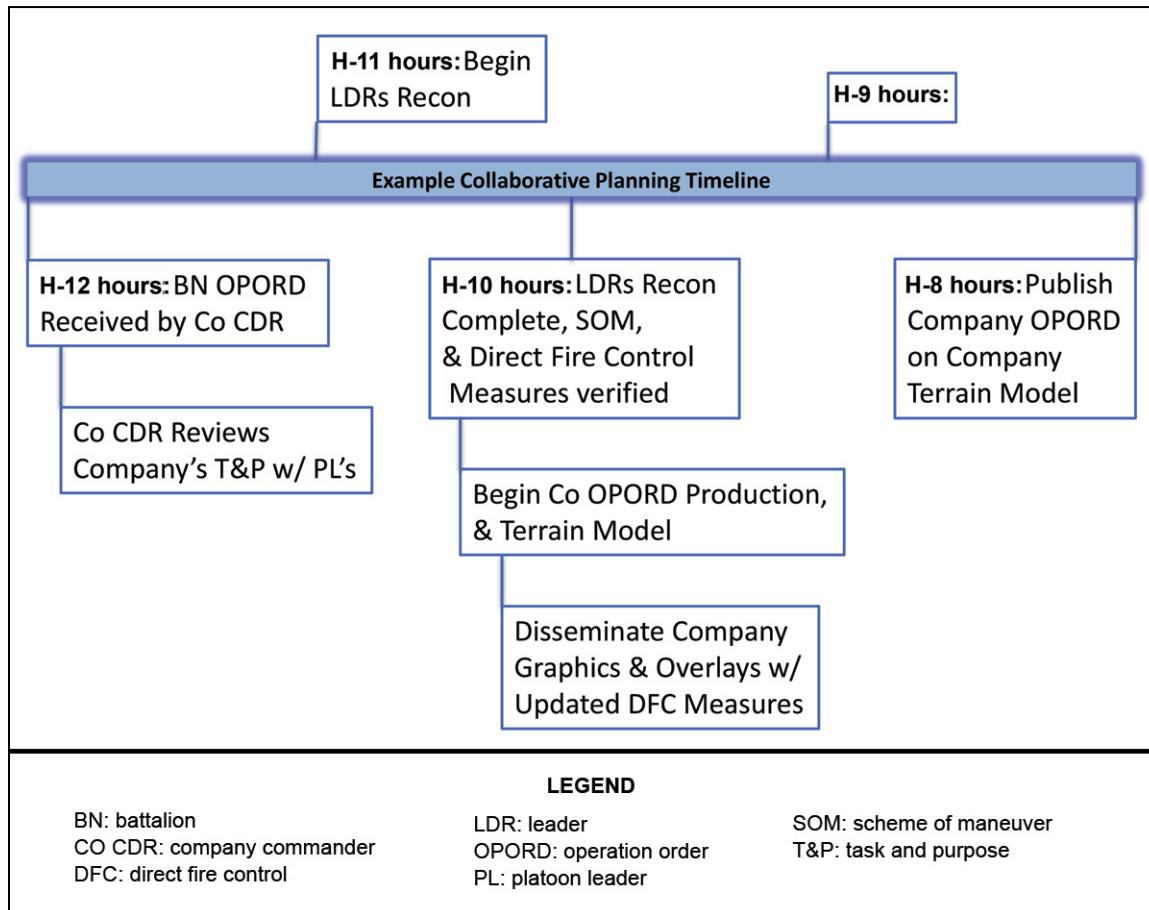
At the NTC, company commanders may have only three hours to produce an OPORD without taking time for subordinates to conduct TLPs. The greatest time management problem observed at the company level is that company commanders fail to follow the 1/3 time standard to publish a company order, mainly so they can publish a 100 percent complete OPORD. Instead, commanders should publish what they have early, with the understanding that there are some unanswered requests for information (RFIs), and publish fragmentary orders (FRAGORDs) as information becomes available.

During the NTC rotation, utilize the collaborative planning process to issue full OPORDs in a fraction of the time it would take a commander to publish company OPORDs using the parallel planning process. Army Doctrine Reference Publication 5-0, *The Operations Process*, 17 MAY 2012, defines collaborative planning as a process whereby “commanders, subordinate commanders, and staffs share their understanding of the situation and participate in COA development and decision making for development of the higher headquarters plan or order.”

Recognizing that time is a key constraint at the NTC, the company should train to execute the collaborative planning process. As the training cycle progresses from squad to platoon level, the company standardizes the OPORD format. Each platoon leader executes four platoon OPORDs before executing a platoon situational training exercise (STX) and live fire exercise (LFX). The company commander utilizes after action reviews and assesses the planning strengths and weaknesses of each platoon leader. The platoon leaders are assigned their portion of the company OPORD based on their individual strengths. The company also executes three practice OPORDs before the company STX and LFX. In total, the company issues six company OPORDs before deploying to the NTC.

The officers in Comanche Company rehearsed and understood their roles during TLPs. When the company commander returned from the battalion OPORD brief, he gathered his platoon leaders, fire support officer (FSO), XO, and first sergeant (1SG) to discuss their mission and specified and implied tasks, and made a tentative plan. Once his subordinate leaders understood the company’s mission, the leaders (individually or as a group) immediately conducted a leader’s RECON patrol where they developed the company’s tentative scheme of maneuver.

At the completion of the leader’s RECON, the company leadership gathered again to discuss what they observed during the RECON and completed the plan. Leaders then wrote their portion of the OPORD. A platoon leader was assigned responsibility for paragraph 1 (analyzing and briefing the modified combined obstacle overlay; enemy-most-dangerous COA; most likely COA; adjacent unit tasks and purposes). The company commander briefed the company mission, expanded purpose, key tasks, and end state. For paragraph 3, the commander briefed the concept of the operation, and the platoon leaders planned and briefed their scheme of maneuver for their respective platoons. The FSO planned the indirect fires plan and was responsible for ensuring that the terrain model was built based on the company commander’s guidance. Another platoon leader was responsible for analyzing and briefing tasks to subordinate units, support units, and coordinating instructions. The company XO and 1SG planned and briefed the service and support paragraph, and the remaining platoon leader briefed the command and signal paragraph. Because the company leadership was writing the order as a planning cell, it made it easy for the company commander to give his guidance, ensure that it was understood, and answer any RFIs his leaders had. Figure 6-2 (next page) is an example of a collaborative planning timeline that illustrates how Comanche Company developed its OPORDs.



**Figure 6-2. An example of company OPORD development.**

This process for producing OPORDs is very effective at the company level. Additionally, the collaborative planning process at company level has multiple positive second- and third-order effects. It helps company commanders develop their subordinate leaders as future commanders. Platoon leaders learn effective TLPs at the company level, which facilitates publishing orders faster at the platoon level.

Battalions that produce timely OPORDs excel at mission command, because subordinate leaders have the time necessary to conduct effective mission planning and rehearsals. This increases the unit's shared understanding at the lowest levels. Leaders at company level must find a method to produce orders whereby the result is a shorter orders process that produces a completed, synchronized plan. The collaborative planning process is a very effective tool to produce a complete order in a short amount of time. Maintaining the 1/3-2/3 Rule is key to completing MDMP and TLPs and effectively managing available time. Units that follow the rule are far more successful in operations at the NTC and more proactive than reactive with available time.

## Chapter 7

# **Sleep to Win and Other Habits of Highly Effective Company Commanders at NTC**

### **CPT Preston Robinson**

#### **Introduction**

Training day 10 and the company observer-coach/trainer (OC/T) reported his counterpart, a young, motivated cavalry troop commander, was attempting to maneuver directly into an enemy section's engagement area for the third time. The predictable outcome was achieved as the troop initiated movement without planning, reconnaissance, security, control, or common sense — the troop was rendered combat ineffective within 45 minutes of line of departure for the third time in two days. As is common at the National Training Center (NTC), the commander did not have a sleep plan and had not slept uninterrupted in several days.

Simply put, rested leaders clearly outperform their fatigued peers at the NTC. Leading with a tired mind is inherently dangerous, and the risks are well-illustrated in Army publications such as the Army Medical Department (AMEDD) *Performance Triad Plan*, as well as the *Leader's Guide to Soldier and Crew Endurance* by the U.S. Army Combat Readiness Center. These publications focus on mental health and the roles that effective sleep, exercise, and nutrition play in resiliency and risk of fatigue. Students of the military profession should read these documents, but pay special attention to the *Leader's Guide*, as it provides an excellent discussion with recommendations for improving sleep health. Sleep has become a major component of athletic development, with professional and collegiate coaches using phone application reminders, later start times, and biometric monitors to ensure that athletes get enough sleep.<sup>1</sup> Chicago Cubs manager Joe Maddon, who won his 800th Major League Baseball game last year, routinely cancels batting practice in favor of modified warm-ups to allow for increased rest.<sup>2</sup>

While science has known for years that effective sleep is essential for learning and risk management,<sup>3</sup> recent studies highlight the importance of sleep in learning, inference, insight, problem solving, and evaluating risk. This chapter:

- Focuses on what effects sleep has on performance in the decisive action training environment (DATE) at the NTC, the Army's most challenging and stressful training environment, where sleep deficits reportedly begin during the train-up period prior to an NTC rotation and continue throughout the training.
- Reviews how sleep affects complex decision making and critical thinking.
- Analyzes the role sleep plays on the performance of 187 company commanders during four NTC rotations by comparing their sleep data to performance on a common set of NTC metrics, the decisive action "Big 10."
- Provides:
  - Standards and leadership techniques used by the most successful commanders.
  - Correlations between serious accidents and the relevant commander's amount of sleep to determine steps that future combat leaders can take to further reduce the risks to their Soldiers.

### The Effects: How Sleep Fuels the Brain

In 2013, Dr. Russell Foster, a professor of circadian neuroscience at Oxford University, showed a three-fold advantage in innovative processes after sleep due to the improved synaptic connection occurring during sleep.<sup>4</sup> B. Jeffrey Ellenbogen and Matthew P. Walker from Harvard Medical School in 2007 demonstrated that a night of sleep profoundly affects the ability to learn complex associations and inference patterns.<sup>5</sup> After a full night's rest, subjects showed a 23 percent increase in the ability to determine third-order effects, compared with the control group.\*

\* Subjects were exposed to ordered patterns and after a period of time, ranked the value; i.e., A>B, B>C, and C>D was instructed and the test subjects were asked to reorder the pictures by rank. In this test A>C is considered a second-order association. Test subjects who slept understood A>D with 90 percent accuracy compared with only 70 percent for the control group.

The brain gets other benefits from sleep, as well. The effects known as “reconsolidation and protection” that are documented benefits of sleep enhance our ability to find insights; develop connections between seemingly unrelated things;<sup>6</sup> and improve problem solving<sup>7</sup> in general memory function. A recent study by Dr. Nicolas Dumay of Exeter University shows that sleep “almost doubles our chances of remembering previously unrecalled material.”<sup>8</sup> All these benefits are, as documented in the Army’s human dimension efforts, essential for combat leaders’ abilities to out-think, out-plan, and out-fight our opponents at every level.

These findings are particularly applicable to the profession of arms. Much of the knowledge learned prior to a battle comes from the military decisionmaking process (MDMP) and troop leading procedures (TLPs) conducted 24 to 72 hours prior to an engagement. If we accept the findings from these studies, we can infer that leaders, especially commanders, should strive to enter a sleep cycle sometime after publishing their plan and prior to initiating the main effort. We know the importance of studying history because it helps us avoid repeating mistakes of our predecessors. Similarly, a tactical commander must associate the lessons previously learned to new information that comes from MDMP and TLPs.

Rehearsals are an essential part of TLPs as they allow all parties to see themselves and others in time and space. The Army’s TLP model encourages rehearsals at all echelons. The research suggests that incorporating a period of rest into the rehearsal timeline improves the leader’s opportunity to make good decisions by finding insights, effectively problem solving, identifying third-order associations, and utilizing a functioning memory.

### The Demands: Complex Tasks, Complex Terrain, and a Guy Who Wants to Kill You

No company at NTC was evaluated as above average in any category without sleeping at least four hours a night.

The experience of commanding a company at NTC is a once-in-a-lifetime experience. No other training environment in the Army allows a brigade combat team to employ all of its systems against a near-peer, integrated, and thinking enemy. The company receives external attachments (enablers with complicated equipment and tactical tasks) with specific expectations. The commander is expected to incorporate the enabler into the company’s tactical plan and ensure that the enabler accomplishes its mission for the battalion or brigade.

The company must connect and communicate externally with adjacent units, often for the first time, to ensure that the battalion and brigade plans do not leave any seams the enemy can exploit. The experience requires the leader to incorporate all systems and attachments, requiring

significant high-level cognitive learning and decision making in a high-pressure and time-constrained environment.

Each company integrates large amounts of new information and knowledge from enablers and the terrain. The NTC provides some of the most inhospitable conditions on earth, with temperatures ranging from 20 to 120 degrees Fahrenheit. Any sign of rain represents a potential flash flood. Steep and unexpected elevation changes are capable of causing sudden vehicle rollovers if not traversed correctly. The terrain offers a unique experience for young leaders to make the leap from reciting mnemonics of key terrain to understanding the integral role that micro-terrain analysis plays in maneuver warfare.

Another stressor experienced at NTC is the opposing force (OPFOR), representing a thinking enemy with near-peer capabilities. The OPFOR commander has near-complete autonomy to design tactical plans and apply his combat power, while benefiting from intimate knowledge of the terrain. OPFOR combat power stresses the brigade's leadership with a conventional force and unconventional threat. Each rotation is a different scenario with a dynamic enemy that learns from experience and innovates constantly. This prevents the rotational unit from knowing what is going to happen before the battle. The commander must learn enemy capabilities and derive the most likely and most dangerous courses of action the enemy may take prior to creating his own tactical plan.

To succeed in such a demanding environment, a commander and his headquarters must identify the important information, commit it to memory, devise a plan to capitalize on opportunities, and communicate this knowledge across an 80- to 200-Soldier formation. The leader must still rehearse and prepare while filtering through incoming reports, prior to applying the knowledge to complex decisions on the battlefield. The Army's training methodology for maneuver officers focuses almost exclusively on preparing commanders to accomplish these tasks.

If a commander had three months to execute the number of operations contained in one rotation, it would already be difficult to plan, rehearse, and execute. Instead, the brigade has less than a month to accomplish its mission-essential training objectives from deployment to redeployment, in an active training area the size of Rhode Island.

The lack of time is the biggest challenge to a commander and his headquarters, as the training design offers very little time for transition between tactical tasks in an attempt to replicate constant pressure on the brigade. A successful commander must be able to delegate tasks to trained, trusted members of the team. Additionally, the commander must be able to find a location where he can rest and reflect on his situation without being distracted with the tasks of the day.

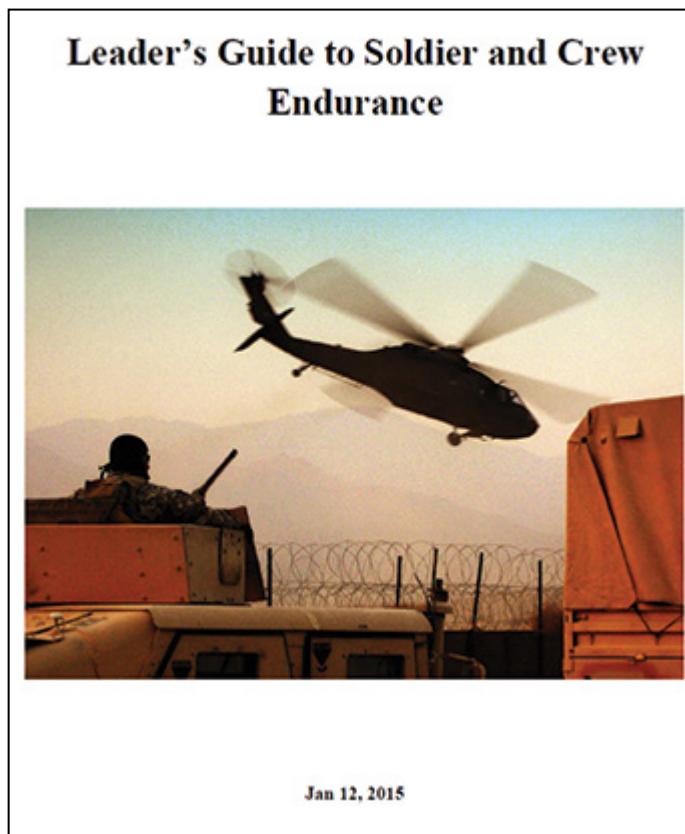
Sleep is often last on the list of priorities at NTC and in the combat arms community as a whole. The infantry and armor communities rely on a certain mindset from Soldiers best summarized on the cover of the Ranger Handbook, *Not for the Weak or Fainthearted*. The mentality described in 1999 doctrine for advanced full-dimensional operations explains that in order to “suppress and destroy an enemy, and the ability – through close, personal, and often brutal combat – to force the enemy to capitulate” requires Soldiers to embrace certain aspects of a Spartan lifestyle. Yet, sleep cannot be one of the items given up or considered a creature comfort. MAJ Robert Rogers published *Standing Orders* in 1759, and they have been re-published in every Ranger handbook since that time. “The True Plan of Discipline” lists sleep twice due to its importance in the effectiveness of his units.

Over the four NTC rotations examined, the average company commander slept only 4.9 hours per day, with commanders in the cavalry community reporting much lower numbers. This is a significant departure from the standards instituted in other professions, specifically, the crew

rest requirements of the aviation community. Army Regulation 95-1, Flight Regulations, makes crew endurance a commander's priority and dictates controls to mitigate the risk from fatigue. The regulation states: "Crew endurance is an integral part of the overall risk management program. It is used to control risks due to sleep deprivation or fatigue and to prescribe thresholds to trigger command decisions whether to accept those risks." These statements seem intuitive and are similar to the language heard from brigade commanders prior to rotations; however, this language is not common in Army doctrine and is absent from the armor and infantry manuals.

The *Leader's Guide to Soldier and Crew Endurance* (see Figure 7-1) outlines the effects of chronic and acute sleep deprivation on decision making and alertness.<sup>9</sup> The guide offers several tools for quickly identifying mental fatigue. Multiple risk factors increase risk dramatically, but addressing some of them can significantly reduce risk. Dr. James Miller's fatigue checklist outlines the following high-risk values:

- Length of wakefulness >19 hours
- Sleep in 72 hours < 18 hours
- Activity periods between 0100-0600 hours
- Number of night shifts in previous 30 days
- Change of 6-12 hours in time zone
- Maximum level of exertion



**Figure 7-1. The guide offers tools to identify mental fatigue.**

The guide also outlines the use of the computerized scheduling aid called Fatigue Avoidance Scheduling Tool (FAST). The FAST is a tool designed by the Department of Defense and used extensively in the railroad and aviation industries to predict cognitive declines due to fatigue.

## **How They Performed: Measured Effects on Performance**

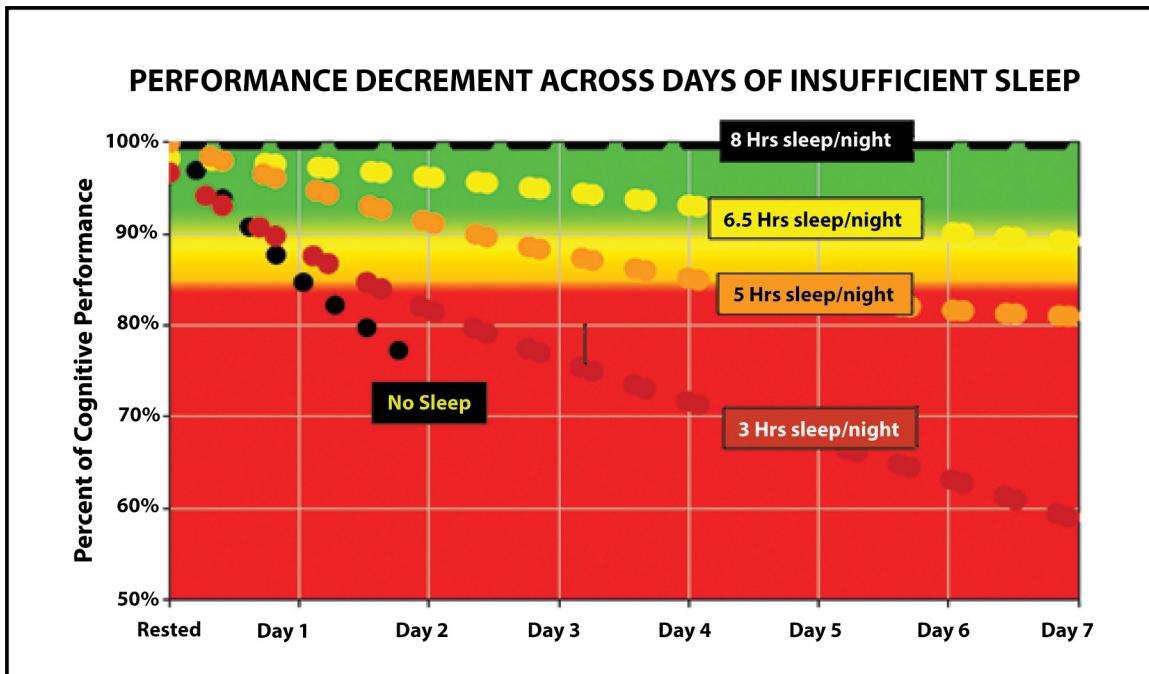
To study the effects of sleep on performance at the NTC, the amount of sleep experienced by a commander was compared to each company's evaluated performance on 10 metrics representing the primary outputs of the headquarters, the Decisive Action Big 10. The sleep data were collected daily over the 14-day training model during the course of four rotations. The sample comprised the leadership of four brigades, 34 battalions, and 187 companies. The data were self-reported each morning by the leader's OC/T, who sent a report to the division tactical operation center prior to 1100 hours daily. Objective measurements using wrist actigraphy suggest sleep times may actually be somewhat lower. A study conducted in 2000 demonstrated that individuals sleep approximately 43 minutes less than their subjective reports.

The Decisive Action Big 10 is a long-standing metric used at the NTC and is taught during OC/T academy training. It provides commanders with objective feedback on performance during preparation and execution of training. Each numerical rating has a specific definition for each discipline. The ratings are on a scale of 1 to 5, where a 1 indicates the action was not done or attempted, while a 5 is a greatly superior performance that goes beyond normal expectations. Performance was evaluated daily and reported independently of the previous day's performance. The disciplines are trained at home station and throughout the NCO education system and officer professional development models, but for many of the companies, NTC is their first occasion to incorporate the many enablers and have stress placed upon their ability to collectively perform the diverse disciplines. NTC also is the first place the companies are externally evaluated. Commanders are generally expected to achieve a 3 in each discipline by the completion of the rotation; 3 is effective at the task; 4 is considered above average.

## **The Distribution: Who Sleeps More?**

Prior to completing the study, a correlation between commanders who slept at least four hours nightly and improved performance for specific disciplines was expected. An example would be that first sergeants (1SG), who are normally associated with having the most impact on sustainment and precombat checks/precombat inspections (PCCs/PCIs), would have shown an upward trend in performance in those discipline regardless of where they started on the performance curve. All four brigade commanders stated during their in-briefs that sleep was important to effective decision making and encouraged their subordinates to make sleep a priority. The study demonstrated that brigade-level leaders did a relatively better job of managing their rest cycles, at an average five and one-half hours. Brigade leaders slept eight to 18 percent more than battalion-level leaders, which is alarming considering that the validated FAST predicts a cognitive function below 85 percent with that amount of sleep (see Figure 7-2, next page). Little variance for sleep was observed between commanders and their senior enlisted advisers (1SGs/command sergeant majors). In the isolated examples of individual company commanders and 1SGs with discrepancies between sleep levels, there was no identified connection to performance.

The most significant observation identified from the analysis was the connection between lower levels of sleep and poor performance. Except for the cavalry units, no company was evaluated as above average (a rating of 4) in any category without its leaders' sleeping at least four hours a night. This outcome is consistent with the recently published AMEDD *Performance Triad Plan*.



**Figure 7-2. Sample of a performance triad guide.**

Only three of the 38 companies were evaluated as having demonstrated above average performance and did so while sleeping an average of less than four hours. All three were cavalry troops. The cavalry troop commanders also had a significant shortfall in number of hours slept, with as much as 21 percent less than their peers. This is likely due to the fact that the cavalry squadron deploys much earlier than the main body to conduct reconnaissance or security operations. The sleep data are captured once a day in the morning, so rest periods at other times would not be reported. Cavalry personnel would probably have a bimodal sleep pattern due to a counter-reconnaissance fight occurring at night.

A majority of the companies rated as above average did so with commanders sleeping four to five hours. This outcome is consistent with the significant workload and activity placed on the units. The one outlier was a particularly impressive group whose overall averages exceeded peers; six of the 15 individuals scored a 4 in at least one category. This same group slept just over eight hours and was led by pilots. The aviation companies scored 13 percent higher across all categories despite not having any inherent advantage other than sleep.

The biggest takeaway from these findings is that if a company commander intends for his company to perform at a high level, he should train a headquarters capable of accomplishing its tasks, supporting his decisions, and leading the company while he rests. One commander, who was evaluated as a 4 in multiple categories, ensured that his command post was filled with quality personnel.

Another commander's standard operating procedure required detailed rest plans for platoon leaders and headquarters personnel, to include himself. The rest plans published upon receipt of the mission and were enforced by the company 1SG. This ensured that each leader had appropriate rest prior to battle periods. This is the same technique used in Ranger companies in preparation for raids and targeted assaults. The company's timelines also included no-later-than times for completion of key events down to the squad level, such as operations orders, rehearsals, and PCIs.

## **The Strongest Associations: Risk Management, PCCs/PCIs, and Graphics**

There are inherent dangers in leading with a tired mind. The link between sleep deprivation and poor decision making is well-documented.<sup>10</sup> The investigations of the tragic accidents of the space shuttle Challenger and the nuclear meltdown at Chernobyl found their proximate causes to be errors in judgment from fatigue, loss of vigilance, and attention to detail.

According to the National Sleep Foundation, up to 30 percent of car accidents are directly attributed to drowsy driving. The National Highway Traffic Safety Administration estimates that sleepy drivers cause more than 100,000 accidents.<sup>11,12</sup> The Army takes many steps to ensure that Soldiers understand the effects sleep has on driving and decision making. Soldiers must complete mandatory training through the Travel Risk Planning System website prior to any leave period or driving greater than 250 miles on pass. While the tactical environment provides a different set of risks than a highway, increased levels of supervision and stimulation for the operators should lower the risk of accident due to tired operators.

The analysis of the four NTC rotations tried to determine whether a pattern existed during DATE rotations between sleep and accidents by analyzing class B and C accidents (there were no class A accidents). AR 385-10, The Army Safety Program, outlines class C accidents as any accident with property damage of \$50,000 or more; any injury or occupational illness that causes one or more days away from work or training beyond the day or shift on which it occurred; or disability at any time, or greater. The analysis removed aviation accidents and accidents with insufficient data present.

In 13 of 19 class B and C accidents, the commander had slept less than four hours the night before and his sleep the night prior was one hour or more less than the already low level of sleep experienced. This lack of sleep should not be interpreted as causing the accident, but rather as a potential indicator of an accident. The lack of sleep by the commander is certainly tied to the increased activity when preparing for a battle. This flurry of activity increases the opportunity for accidents above normal conditions. It should also be noted that specific data for the role that sleep or rest plays in the accidents is not easily inferred from the investigative reports.

As a commander and operator lose sleep, their ability to make rational decisions decreases, setting conditions for a negative outcome. The human brain has very little ability to self-diagnose mental fatigue; the more tired, the worse the self-awareness. However, the evidence does support the assertion that a commander's risk assessment should be re-evaluated if either the leader or a vehicle operator lacks a normal amount of sleep.

A common training myth in military circles is that a commander should experience an exhaustive state during training, so he can improve his performance under these circumstances. The premise is that a leader is better prepared for the potential rigors of sleep deprivation in combat after experiencing them in training. A discussion is needed when designing training objectives to determine how much risk due to sleep deprivation the commander is willing to accept, and what legitimate outcomes are expected in the leader's development.

A separate and more deliberate discussion is needed with regard to how senior commanders evaluate subordinates' rest levels prior to sending them into a high-risk situation (e.g., direct fire engagement in combat).

## **Conclusion**

Appropriate sleep and rest are essential to learning and applying new knowledge. This has been well-established by scientific studies. Leaders can no longer say, "I cannot imagine a time where I won't just ask for an infantry company to jump." For a tactical unit to perform to its potential, effective controls for sleep management must be defined and enforced. As leaders grow tired,

they become more willing to assume risk. They are less likely to learn new information, identify errors in their own logic, or identify potential opportunities to exploit on the battlefield.

The data collection methods at the NTC are currently based on self-reporting. Wrist actigraphy from a band or watch worn by the leader would provide the leader and the Army with accurate information on current sleep patterns. The information could be compared against prospective studies designed to validate the techniques used by successful commanders in the past, such as headquarters personnel time in position, timeline planning tools to prioritize rest priority of work, or prescribed crew cycles similar to aviation task forces. This feedback could validate which command post policies are effective in managing leader rest and meeting the demands of a constant threat.

Future study should focus on the commander's tactical decisions and the command post's ability to support and execute those decisions. This would provide a more complete picture of the effects of sleep on his unit's and his personal preparation to fight the OPFOR. The study could also serve to identify best practices for effectively managing rest in a DATE.

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## Chapter 8

### Preparing for Combat: Troop Leading Procedures for Field Artillery Batteries

**CPT James A. Silsby, III; CPT Adam D. Westbrook; and CPT Fredrick O. Nash**

The platoon leader checked his watch for the third time in 10 minutes. “How could this happen to us?” he thought as his vehicles stopped for badly needed fuel and ammunition on a moonless desert night. Arriving late at the refuel, rearm, resupply (R3P) site, they were going to miss movement to their initial position area by 90 minutes. “Hopefully the Cav won’t need us before then,” he thought. The platoon moved out together from the R3P site groping their way slowly down a desert trail for the next checkpoint. Without warning, an improvised explosive device detonated near the lead vehicle, followed by a volley of rocket-propelled grenades and machine-gun fire. “Blocked ambush!” With the platoon leader’s vehicle destroyed, the platoon hesitated, not knowing what to do. This was an action they had not rehearsed. “How could this happen to us?” As the platoon was methodically raked with fire from the ambushers, some of the gunners attempted to return fire. Most found their weapons coated in dust and dirt, many jammed. “How could this happen to us?”

This vignette is all too common at the National Training Center (NTC). Leaders have the best training opportunity in the world to learn at the NTC, but on the battlefields of the future, they will not get second chances. Before battery commanders are forced to ask, “How could this happen to us?” they should ask, “How can we prepare for this?” One of the best ways to prepare batteries and minimize friction is to practice good troop leading procedures (TLPs).<sup>1</sup>

Field artillery batteries often struggle to master TLPs at the NTC. During mission planning, battery commanders have difficulty “seeing themselves” and understanding their ability to accomplish assigned missions based on the battery’s status. Battery commanders often delay in issuing the warning order (WARNO) critical to beginning the battery’s preparation for combat while they wait for the battalion’s plan. Operation order (OPORD) briefs often do not use standardized formats, include graphics for subordinates, or use a terrain model to help build understanding. Commanders generally do not use confirmation briefs or back briefs to ensure that subordinates understand the plan. When preparing for operations, batteries often do not conduct pre-combat checks (PCCs) and pre-combat inspections (PCIs), and when they do, they are not completed thoroughly. As a result, NTC observer-coach/trainers (OC/Ts) see battery after battery stumble through preparation for combat.

#### **Recommended Tactics, Techniques, and Procedures**

The following TLP steps address many of the persistent observations witnessed by NTC OC/Ts in a decisive action training environment (see Figure 8-1, next page):

- **Step 1 (Receive the Mission).** Good TLPs begin with the battery commander maintaining a running estimate. This need not be bigger than the margins of his map board or the back of his green book, but should include available combat power, ammunition, and fuel status — the critical elements needed to get his unit in the fight. The purpose of the running estimate is to allow the commander to rapidly analyze assigned missions and determine if they are supportable. If not, this provides him with coordination points to work through with the battalion staff. The vignette above demonstrates how a failure to account for critical sustainment might negatively affect the operation.

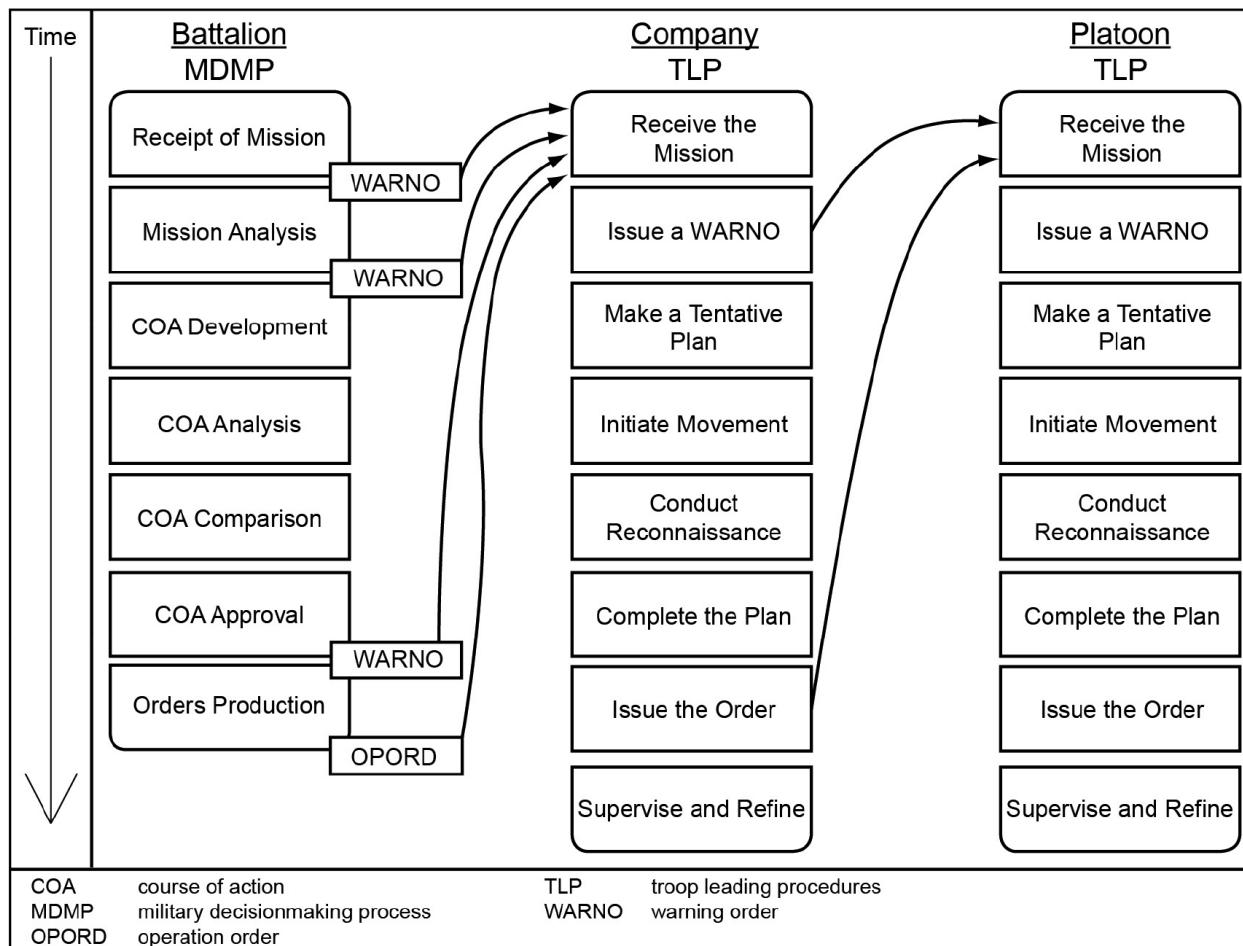


Figure 8-1. Military Decisionmaking Process/TLPs.

- **Step 2 (Issue a WARNO).** The battery commander should issue a WARNO early to alert his unit of imminent action. The WARNO should address: the general enemy and friendly situations, anticipated mission, anticipated field artillery tasks (FATs), directed PCCs, rehearsals, and a timeline. Directed PCCs and rehearsals are selected based on the enemy threat, anticipated mission, and FATs. The battery commander must weigh the time required to obtain details for the upcoming operation versus time the battery could use to prepare. In the absence of details pertaining to the mission, the commander must determine what he believes the battery is required to do and must use the available time to prepare. Waiting until all information is available reduces the time available. If the platoon in the vignette had taken the time to clean and inspect weapons and rehearsed an open ambush battle drill, it would have improved its chances of survival.
- **Step 3 (Make a Tentative Plan).** Battery commanders should consider the acronym METT-TC (mission, enemy, terrain and weather, troops and support available — time available and civil considerations) when developing the plan. To accomplish the mission, the commander must consider the turret load required to service targets and specify in his OPORD the load for guns, prime movers, and ammunition carriers. He must consider enemy threats specific to his battery. Sometimes, this requires the battery

commander to visualize this threat when not enough detail is provided by the battalion to describe the threat to his formation. In dealing with terrain at the battery level, commanders are often frustrated with a lack of flexibility provided by the battalion plan, particularly when position areas are not the doctrinal size or there are not enough position areas planned. They should provide bottom-up refinement to the battalion's plan when assigned terrain is not suitable.

Additionally, there is still much planning a battery commander can do. He divides the battery position area into platoon position areas, when possible, to maintain dispersion and flexibility in survivability moves. This allows platoon leaders to further divide their position areas into primary and alternate firing areas and focus their reconnaissance. He analyzes routes, identifying primary and alternate, if not specified. He allocates precious time with the goal of providing two-thirds of the time to subordinates for their preparation. Battery commanders anticipate receiving the battalion OPORD late and account for it with strong WARNOs (see Step 2). Rules of engagement must be clear to ensure that Soldiers know how to interact with civilians on the battlefield.

- **Step 4 (Initiate Movement).** This step includes any movement necessary to continue preparation or position the unit to execute the mission. For artillery batteries, this could be movement to a new assembly area or position area, movement to an R3P site, or organization of an advance party for reconnaissance. Initiating movement could also be starting PCCs and PCIs or conducting battery and platoon rehearsals to prepare for upcoming operations. This step can be executed throughout the TLPs.
- **Step 5 (Conduct Reconnaissance).** The detailed steps of reconnaissance, selection, and occupation of a position (RSOP) are discussed in detail in Army Techniques Publication (ATP) 3-09.50, *The Field Artillery Cannon Battery* (Chapter 3), and ATP 3-09.70, *Paladin Operations* (Chapter 3). Particular focus for the RSOP should include: security of the assigned position area; development of graphic control measures (analog and/or digital) to guide the main body's movement; validation of the primary, alternate, contingency, and emergency (PACE) communications plan with the battalion; and identification of fire direction center locations within a six- or eight-digit grid.
- **Step 6 (Complete the Plan).** The battery commander should have time to incorporate information gained from the RSOP, if time has been properly allocated. A standardized OPORD format, used across the battery, helps the briefer ensure he does not skip critical information, helps the brief follow a logical format, and eases note-taking. Commanders should be careful to focus on the essentials and not fight the format in a time-constrained environment (completing an excellent situation paragraph at the expense of the execution paragraph does not help the battery). Graphics available for issue or copying also are important to quickly share understanding. Units must ensure that acetate is on hand prior to field operations. A terrain model is a helpful briefing tool, but again, this requires the construction of a terrain-model kit beforehand. Finally, the battery commander must consider the team he is using to develop his order and brief. As he completes the mission and execution paragraphs, the executive officer could prepare the situation paragraph while the first sergeant prepares the sustainment, command, and signal paragraphs, and a team of Soldiers prepares a terrain model from which to brief and rehearse.

- **Step 7 (Issue the Order).** The audience for the OPORD must be carefully considered. Whenever section chiefs are present (battery or platoon OPORDs), the unit has temporarily sacrificed firing capability. This may not be an issue, but should be managed by the battery commander and coordinated through battalion. Confirmation briefs also are essential for the battery commander to ensure that his platoon leaders understand the plan before beginning their own mission planning.
- **Step 8 (Supervise).** This step can make or break the success of a unit. Battery commanders need to consider who is conducting PCIs, when, and what equipment will be inspected. The executive officer or first sergeant may have time to conduct PCIs if the commander is too busy. The commander considers reporting requirements he can use to stay updated on the status of platoon preparations. Examples are “Report when your platoon OPORD is complete” or “Report when your platoon is complete with battle drill rehearsals.” Commanders hold subordinates accountable for the time given to prepare.

## Conclusion

Good TLPs help prepare units for combat and reduce anticipated challenges in battle. Commanders who do not maximize the benefits gained during the TLP process do so at the risk of mission failure. This requires some mental energy and time devoted to addressing TLPs in the unit’s tactical standard operating procedures (see Figures 8-2 and 8-3 on the following pages). It also requires training time to reinforce the process. Through repetition, units reap the benefits of good TLPs in preparation for the battlefields of the future.

### Note

1. Combined Arms Training Strategy TS 07-2-5081, *Troop Leading Procedures*, online at the Army Training Network, is the best resource available for TLPs. Field artillery doctrine currently lacks TLP information specific to artillery batteries.

<b>Troop Leading Procedures</b>	
<b>1. Receive the Mission.</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> May require a backbrief to higher headquarters.</li><li><input type="checkbox"/> Determine total amount of time to plan, prepare, and develop an initial timeline.</li><li><input type="checkbox"/> Conduct initial assessment of the situation (hasty mission analysis).</li><li><input type="checkbox"/> Analyze assigned or anticipated fire support tasks (FSTs) and/or field artillery tasks (FATs).</li><li><input type="checkbox"/> Develop a restated mission.</li><li><input type="checkbox"/> Identify precombat checks (PCCs) in order (use tactical standard operating procedure [TACSOP]).</li></ul>
<b>2. Issue the Warning Order (WARNO).</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Use WARNO format.</li><li><input type="checkbox"/> Aids in parallel planning process.</li><li><input type="checkbox"/> Issued to key leaders face to face or over FM or Force XXI Battle Command, Brigade and Below (FBCB2) as quickly as possible to maximize time for subordinates to plan and prepare.</li><li><input type="checkbox"/> Contains as much detail as available.</li><li><input type="checkbox"/> Normally includes:<ul style="list-style-type: none"><li>○ Mission or nature of operation.</li><li>○ Time and place for issuing the operation order (OPORD).</li><li>○ Movements to initiate.</li><li>○ PCC priorities.</li><li>○ Guidance for rehearsals.</li></ul></li><li><input type="checkbox"/> Additional WARNOs can be issued as more information becomes available.</li></ul>
<b>3. Make a Tentative Plan.</b>	<ul style="list-style-type: none"><li><input type="checkbox"/> Leaders generally have time to develop only one course of action (COA), but may develop others if time permits.</li><li><input type="checkbox"/> Conduct the following steps in order:<ul style="list-style-type: none"><li>○ Mission Analysis. (Using mission, enemy, terrain and weather, troops and support available — time available and civil consideration factors [METT-TC]; see Figure 8-3)</li><li>○ COA Development.<ul style="list-style-type: none"><li>* Builds off an improved understanding of the situation gained during mission analysis.</li><li>* Establish planning range using 2/3 range of most available munitions fired under standard conditions (this can be refined later if time allows).</li><li>* Draw backwards range fans from assigned targets/target areas to identify optimal position areas for artillery (PAAs) if not assigned.</li><li>* Generate options (different ways to complete the mission).</li><li>* Array forces (match forces against options).</li><li>* Develop concept of operations.<ul style="list-style-type: none"><li>&gt; Positioning requirements.</li><li>&gt; Potential hip shoot locations.</li><li>&gt; Necessary rehearsals (technical, fire support, special missions).</li><li>&gt; Logistics requirements.</li></ul></li><li>* Assign responsibilities.</li><li>* Prepare COA statement and sketch.</li></ul></li></ul></li></ul>

**Figure 8-2. Sample TLP card for TACSOP (continued on next page).**

- COA Analysis.
  - \* War game developed.
  - \* Box, belt, avenue in depth methods.
  - \* Action, reaction, counteraction.
  - \* May identify requirements for unplanned refuel, rearm, resupply, survey points (R3SPs), additional control measures.
- COA Comparison. Evaluate based on established criteria such as mission accomplished, time, risk, casualties incurred, enemy action, ammunition, subordinate unit tasks/purposes.
- COA Selection. Make a decision!

## **4. Initiate Movement.**

- If the mission requires repositioning, start as early as possible.
- May be movement to:
  - PAA.
  - New area of operations.
  - Tactical assembly area.
  - R3SP.
- May include reconnaissance, selection, and occupation of position (RSOP) parties or quartering parties.

## **5. Conduct Reconnaissance.**

- General RSOP — Battle Command/Platoon (PL); detailed RSOP — PL/General Squadron Group
- Methods: Map, air, and ground
- “What” is being reconnoitered is driven by the tentative plan.
- Often provides the opportunity to:
  - Accomplish coordination with adjacent and supported units.
  - Validate the suitability of PAAs.
  - Confirm usability of routes.
  - Identify likely ambush locations.
  - Record exact times required to move between locations.
  - Identify locations for emergency missions.
  - Identify potential R3SP locations.
- Can be used to take firing capability forward (i.e., to determine route suitability, conduct a registration/offset registration, and/or confuse the enemy).

## **6. Complete the Plan.**

- Incorporates the results of the reconnaissance; the tentative plan may change.
- Graphically depicts the operation (terrain model, best map overlay).
- Conduct final coordination with headquarters and adjacent headquarters if time is available.
- Rehearse briefing if time is available.

## **7. Issue the Order.**

- Use OPORD format with Execution Matrix (see page 11, OPORD format and page 12, Execution Matrix).
- Issue to key leaders face-to-face, over FM, or FBCB2.
- Best issued on the terrain if possible (i.e., defense).
- Use backbriefs to make sure orders and priorities are understood.
- State the PCIs you and other key leaders conduct.

## **8. Supervise.**

- Perform continuously.
- Complete PCIs and spot-checks (weapons, load plans, maintenance).
- Ensure the second in command is prepared to execute in the leader's absence.
- Listen to subordinate OPORD.
- Ensure local security is maintained and rehearsals are conducted.

### **Mission Analysis Using METT-TC**

#### **Mission**

- Mission, commander's intent, and concept (1 and 2 levels up)
- Assign fire support tasks/field artillery tasks
- Additional Tasks (essential, specified, implied)
- Constraints
- Conclusions

#### **Enemy**

- General situation
- Composition, disposition, strength
- Capabilities by warfighting function (What can hurt you?)
- Most likely/most dangerous courses of action
- Conclusions

#### **Terrain and Weather**

- Identify area of operations and area of interest
- Terrain
  - > Elevation
  - > Slope
  - > Soil composition
  - > Intervisibility lines
  - > Avenues of approach
  - > Key/decisive terrain
- Weather
  - > Visibility
  - > Wind; precipitation; cloud coverage
  - > Temperature/humidity
- Conclusions

#### **Troops**

- Combat power; weapon/ammunition capabilities
- Logistics
- Leadership; morale
- Training and experience
- Conclusions

#### **Time**

- Field Artillery-supported battalions timelines
- Hard times (i.e., in position ready to fire, times over target)
- Troop leading procedures time (1/3-2/3)
- Light times
- Enemy timelines
- Conclusions

#### **Civil Considerations:** Areas, structures, capabilities, organizations, people, events

**Figure 8-3. METT-TC factors for mission analysis.**



## Chapter 9

### How Can the Cavalry Squadron Increase the Responsiveness of Field Artillery Fires?

**CPT Joseph Sanders**

The biggest hurdle integrating fires into combined arms maneuver is responsive and timely artillery support. A common practice is to provide a field artillery (FA) battery to the cavalry squadron under an attached, direct support (DS), or decentralized manner to facilitate fires. Although this practice can be effective in exceptional circumstances, such as when the squadron is well forward, it is not the preferred method because it sacrifices centralized control and the ability to mass organic fires with the entire FA battalion. As a result, artillery loses its ability to influence the brigade's fight and fully achieve the maneuver commander's desired effects. Based on observations from multiple rotations at the National Training Center (NTC), the cavalry squadron can reduce this friction through proper planning and analysis in four areas:

- **Command and support relationships.** The brigade combat team (BCT), cavalry squadron, and fires battalion often lack an understanding of how command and support relationships are defined. As a result, batteries assigned in DS receive insufficient tactical or positioning guidance, and Class I, IV, and V support.
- **Flexible communications plans.** Lack of an integrated primary, alternate, contingency, and emergency (PACE) communications plan hinders receipt of meteorological (MET) data and updated fire support coordination measures. Lack of communication also desynchronizes the DS battery and reduces responsiveness of fires.
- **Synchronized movement and positioning.** The DS battery is typically not in a position to effect targets based on the requirements of the squadron commander (SCO). Poorly synchronized movement and positioning stem from insufficient detailed analysis and planning.
- **Rehearsals.** Lack of integrated rehearsals degrades understanding of the mission as a whole. If the DS battery is not in a position to support the SCO's guidance for fires, the result can be long fire-mission processing times and a loss of trust between fires and maneuver.

If the brigade commander and the fire support coordinator (FSCORD) decide to place the artillery battery in direct support of the cavalry squadron to increase range capability, the squadron operations officer (S-3), the battery commander, and the squadron fire support officer (FSO) must play a much larger role in the coordination, analysis, and planning of DS battery operations. This cross-talk ensures that the DS battery is employed in the most effective and efficient manner possible.

#### **Command and Support Relationships**

As brigades begin operations at NTC, many units quickly identify the challenge associated with providing indirect fire support to cavalry squadrons that are directed to move beyond the supportable range of the brigade's FA assets. The first hurdle for the staff to overcome is to figure out how to provide fire support to the squadron that is beyond supportable range. This can come in the form of close air support, rotary-wing aircraft, or echelons above the brigade artillery assets.

If these methods are not feasible, the brigade staff directs the squadron to be supported by elements of the organic FA battalion. The second hurdle is to identify which command and support relationship is the most appropriate for their situation. One technique that is sometimes effective is to place an FA battery in DS. Short-duration operations are not long enough for an

attached relationship to be necessary. An attached command relationship requires the gaining unit to provide maintenance, logistical, and administrative support. A staff untrained and unprepared to complete these tasks in a condensed timeline, specifically with a lack of understanding about ammunition ordering and the process, reduces the effectiveness and responsiveness of the battery. Army Doctrine Reference Publication 5-0, *The Operations Process*, 17 MAY 2012 (Table 2-1, Army Command Relationships, and Table 2-2, Army Support Relationships), explicitly outlines who is responsible for specific tasks based on the specific relationship.

## **Communications**

Communication planning must be detailed as a focal point through mission analysis and course of action (COA) development. Communication planning must include frequency modulation (FM) voice, FM digital, as well as all the platforms the cavalry squadron uses to distribute information. FM voice and digital are typically a struggle for the cavalry squadron, more than most, based on the depth of its mission requirements. Adding an FA battery increases the complexity not only for fire missions processing and air clearance, but also for the other data (fire support coordinating measures [FSCMs], MET, etc.) necessary to ensure that FA fires are delivered in a safe and effective manner because the battery is probably out of communications range from the FA battalion and brigade fire support element (FSE). The squadron staff has responsibility for providing the DS battery with the target list, fire support execution matrix (FSEM), schedule of fires, fire support and air space coordination measures, and MET data. With the addition of the DS battery, the FSO must manage three separate PACE plans (squadron to brigade, squadron to troops, squadron to battery). The plan must allow enough flexibility to pass information and fire mission data to the brigade FSE, troop fire support teams (FISTs), and to the battery fire direction centers. The only reason to re-task-organize in this manner is to increase responsiveness and range capability at the expense of massing fires. However, if little analysis is conducted with respect to communication capability range across the formation, conditions are set for under-utilization.

## **Synchronized Movement and Positioning**

According to Field Manual (FM) 3-09, *Field Artillery Operations and Fire Support*, 04 APR 2014 (page 1-51): “As the scheme of maneuver develops, FA positioning and movement plans and information become more detailed, and the maneuver headquarters G-3/S-3, fires cells, and [FA battalion] S-3s conduct lateral coordination. The supported command’s chief of fires/FSO can assist supporting [FA battalions] with terrain management issues. Level III threats (requires commitment of tactical combat force) may cause significant traffic as sustainment units and civilians move away from the threat. In such cases, FA units may need to request priority for movement. Aerial reconnaissance may facilitate movement planning, helicopters can quickly emplace advance party teams, and unmanned aircraft systems can be used to scout ahead of moving FA units.”

Typically, squadron staffs fail to incorporate the DS battery into the squadron scheme of maneuver. Movement is not properly synchronized in time and space to ensure that assets can range planned targets. As a result, cavalry troops, squadron headquarters and trains, and the FA battery often maneuver without synchronization. Generally, the battery is left to wait on maneuver space to open for approach marches, but after organic assets are clear of the routes. Many times, this causes the battery to be late in establishing its firing positions.

According to FM 3-09 (page 1-51), “Coordinating positions for FA is a collaborative effort among the maneuver headquarters, fires cells, and FA headquarters to ensure continuously available FA (indirect fires, radar, survey, and MET) support to the force.” Early in the operations

process, personnel identify the possible units involved; the general position areas required; location, suitability, and times when these locations are required; and possible routes for movement.

In planning movement, the SCO determines where to generate effects, through analysis of the terrain and enemy. Determining this helps identify potential position areas for artillery and allows the battery commander and squadron FSO to begin time/movement analysis. Timing should consider displacement, movement between position areas, and occupation times. There should be a mutual understanding that artillery units are capable of executing fire missions on the move pending communication and ammunition range capabilities.

According to Training Circular (TC) 3-09.31, *Fire Support Training for the Brigade Combat Team Commander*, 15 NOV 2013 (page 3-3), the FA battalion or squadron FSO is responsible for “coordinating the positioning and movement of fire support assets in the battalion area of operations.” Planning and analysis from the squadrons at NTC rarely go beyond the reconnaissance of the position area of artillery (different from reconnaissance, selection, and occupation of position) if the FA battery can range beyond the forward line of own troops (FLOT).

Again, detailed analysis from the squadron FSO, battery commander, and battery fire direction officers is necessary to ensure that the proper effect is delivered at the correct time and place. First, the squadron identifies land that is not occupied or contentious that supports FA range capabilities. The cavalry squadron must understand that the battery commander conducts his own reconnaissance of the position area of artillery to ensure suitability and feasibility of an occupation. Typically, the squadron conducts only a general map spot to understand range capabilities by munition type. Second, a better understanding is developed through a technical rehearsal utilizing the advanced FA tactical data system as well as utilizing the “2/3 Rule” planning ranges, accounting for changes in elevation along the gun target line. Third and maybe most importantly, a FA battery can secure itself. A battery should not be forward of the FLOT, but there is no doctrine saying that it cannot be forward of a cavalry troop or personnel as the squadron is arrayed in breadth and depth. A general rule that can be utilized is positioning the howitzers three to five kilometers behind the FLOT, dependent on terrain, the enemy and howitzer type, in an effort to range beyond the effective range of the scouts and observer’s optics during times of clear visibility.

A frequent observation is BCTs desire to employ fires deep, but rarely are the howitzers positioned in a manner to range one to two kilometers beyond the FLOT. This is due to a lack of synchronized movement of FA assets with maneuver forces and failing to anticipate when and where the forward unit is likely to make contact with the enemy. Therefore, the howitzer ranges do not effectively support the commander’s fire support tasks (FSTs). The utilization of organic mortars also plays a role and should be utilized to affect the close fight. Echeloning fires gains additional time to allow the battery to best position itself to engage all planned targets as well as cover the enemy’s most likely and most dangerous COAs.

## **Rehearsals**

According to FM 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014 (page 12-1), rehearsals allow leaders and their Soldiers to practice key aspects of the concept of operations. Rehearsing key combat actions before execution allows participants to become familiar with the operation and translate the relatively dry recitation of the tactical plan into visual impression. This impression helps them orient themselves to their environment and other units when executing the operation. Moreover, the repetition of combat tasks during the rehearsal leaves a lasting mental picture of the sequence of key actions within the operation.

Conducting rehearsals to standard allows parties to visualize the plan in time and space as well as identify possible friction. In the fire support realm, there are two types of rehearsals: the fire support tactical rehearsal and the technical rehearsal. The tactical rehearsal ensures that the fire support plan is accomplishing the commander's guidance for fires, as well as the specified FSTs. Also, the tactical rehearsal validates the observation plan with both the primary and alternate observers and confirms triggers for the execution of each mission. The technical rehearsal is used to understand the supportability of the FA battery in time and space. The rehearsal ensures that each mission is within range capabilities, that enough ammunition is on hand at that specific time, and that missions are synchronized and prioritized. Through observations of the squadrons, when working through a condensed timeline, the fire support rehearsals are the first to be cut.

In terms of an FA battery being in DS to the cavalry squadron, NTC observations indicate that the battery often is left out of the combined arms rehearsal (CAR) or is an afterthought behind the movement of the troops. The squadron usually conducts a fire support rehearsal that does not integrate the battery, leaving the battery commander and fire direction officers guessing how missions are prioritized. This results in the squadron assuming that all missions are supportable.

For the most responsive fires, the battery must be integrated into the squadron's planning process, CAR, and fire support rehearsals. The battery commander and fire direction officers must hold the squadron accountable to conduct a technical rehearsal. The time sequencing identified in the CAR is vital in allowing the squadron S-3 to understand how long it takes the battery to move position areas and conduct survivability moves, as well as occupy subsequent positions. If the plan is developed and understood by all parties, the FA movement is better synchronized and allows the battery to occupy the best positions, rather than settling for the most convenient.

## **Recommendations**

TC 3-09.31 (page 1-1) provides duty descriptions for each major player between the BCT and the FA battalion for fire support planning. In order to translate those responsibilities for a situation when a battery is in DS of the cavalry squadron, the following recommended adjustments are necessary to facilitate rapid and responsive fires. Additions to the responsibilities listed in TC 3-09.31 are marked with an asterisk (\*), with the majority of additional responsibilities falling to the squadron FSO and element. In no uncertain terms do the FSO and battery commander assume a larger role when trying to close the gaps left in the absence of a FA battalion S-3.

### **Squadron Commander (SCO)**

- Synchronize fire support with the scheme of maneuver.
- Ensure that the FSCOORD and FSO understand fire support guidance: task(s) and purpose(s) in no uncertain terms. Focus on the “what, where, when (and for how long), and why” — the FSCOORD/FSO should recommend the “how.”
- Ensure that the staff integrates reconnaissance and surveillance, maneuver, fires (including offensive information operations and other non-lethal means, if applicable), Army airspace command and control, and obstacles. Select someone responsible for overlays (whether analog or electronic).
- Approve the fires paragraph, high-payoff target list (HPTL), attack guidance matrix (AGM), target selection standards (TSS), or a target selection matrix (TSM) that combines the preceding three, the essential FST, and their logical execution sequence.
- Approve FSCMs.

- Clear fires in zone. Normally this is managed at the command post (CP) with the FSO or fire support plans officer leading the CP and subordinate units through a clearance of fire battle drill.
- Train company/team commanders to know, understand, and execute targets in their zone.

#### **Squadron Executive Officer (XO)**

- Integrate the targeting process into the MDMP and normal brigade/battalion battle rhythm.
- Supervise the “decide function” of targeting.
- Forecast and coordinate additional support requirements for the DS battery (added from FA battalion XO).\*

#### **Squadron S-3**

- Based on FSO recommendation, integrate all fire support assets into the concept of the operation.
- Select, with the commander, combined arms engagement areas to kill the enemy.
- Develop the synchronization matrix that includes fire support.
- Develop a decision support template with input from the FSO.
- Integrate fire support actions and the execution of essential FSTs into the CAR.
- Approve positioning of FA and other fire support assets (added from FA battalion S-3).\*
- With input from the staff, especially the S-2 and FSO, select the high-payoff targets to be presented to the commander for approval.

#### **Squadron FSO/FSE**

- Serve as the FSCOORD for the SCO (primary adviser on all matters pertaining to fire support).
- Perform the same or similar duties for the squadron as the brigade FSO performs for brigade.
- Keep the SCO, FSCOORD, and brigade FSO informed of the current status, location, and activity of all fire support assets.\*
- Participate in the MDMP and targeting process, keeping the DS battalion S-3 and battery commander informed throughout. Develop for approval: the fire support plan with FSTs and supporting products (HPTL, AGM, TSS, TSM, and FSEM). Disseminate approved plans and products to the DS artillery battery, troop FSOs, and brigade FSE.\*
- Assist the S-3 and battery commander in terrain management for fire support assets.\*
- During the MDMP and targeting meetings, recommend (with assistance from the S-2 and S-3) what targets to attack, when, where, and with what assets (lethal/non-lethal).\*
- Anticipate changes during mission execution and recommend and coordinate revisions to the fire support plan.\*
- Participate in CARs and conduct fire support rehearsals.\*
- Participate in brigade and battalion combined arms and fire support rehearsals.

- Recommend to the maneuver battalion commander how to best employ and control FISTs. Options include centralized control of a pool of FISTs to execute brigade and battalion essential FSTs; decentralize control (down to company level) to execute brigade, battalion and company essential FSTs; or, combination of the two.
- Recommend howitzer and battalion mortar employment and usage considerations to the S-3.
- Ensure that targets received on the brigade target list are refined as necessary and sent back to the brigade FSO and the DS battery.
- In accordance with the squadron operations order and guidance received from the DS battalion commander, plan for the accomplishment of essential FA tasks.\*
- Coordinate positioning of FA assets with the squadron S-3 and battery commander to include positions for reinforcing FA elements.\*

### Battery Commander

- Ensure that assigned targets are rehearsed, feasible, and fired according to scheme of fires.
- Position fire support personnel where they can best execute essential FSTs.
- Ensure that the company FSO participates in all combined arms and fire support rehearsals.
- Assist the squadron FSO in planning and coordinating fire support for the squadron. Become an adviser on fire support matters to the SCO. Collocate with the SCO, as necessary, but normally during mission execution.\*
- Command the unit, providing primary fire support to the force.\*
- Participate (as feasible) with the squadron orders group and during targeting meetings. Assist in the synchronization of fires and maneuver.\*
- Provide accurate, timely, and effective FA fires.\*
- Approve the DS battery FA support plan.\*

### Summary

FA units, usually at the platoon or battery levels, are attached or in DS to cavalry squadrons to increase responsiveness under exceptional circumstances and ensure fire support availability by accounting for weapons and communications ranges during the reconnaissance fight.

FA fires still are not as responsive as necessary due to a lack of planning and analysis at the squadron level. With more detailed analysis and planning in the areas of command and support relationships, flexible communications plans, synchronized movement and positioning, and integrated rehearsals, the battery's ability to provide accurate and timely fires in support of the commander's desired effects is increased at the expense of centralized control and the ability to mass fires by the FA battalion. The squadron S-3, the battery commander, and the squadron FSO must play a larger role in operations when these changes are made and be the link to the battery from the squadron to create shared understanding in accomplishing the mission.

### References

1. FM 3-09, *Field Artillery Operations and Fire Support*, 09 APR 2014.
2. TC 3-09.31, *Fire Support Training for the Brigade Combat Team Commander*, 15 NOV 2013.
3. FM 6-0, *Commander and Staff Organization and Operations*, 05 MAY 2014.
4. Fires Center White Paper, *Fire Support Planning for the BCT and Below*, DEC 2008.

## Chapter 10

### **Occupy, Defend, and Support from the Brigade Support Area**

#### **LTC Brent Coryell and CPT Shayne Heap**

#### **Brigade Support Area Operations: The Decisive Action Balance of Support vs. Defend**

One of the challenges faced by brigade support battalions (BSBs) and regimental support squadrons at the National Training Center (NTC) is establishing a brigade support area (BSA) able to sustain brigade combat team (BCT) tactical operations. With limited BSA field training at home station and years of conducting operations from forward operating bases and combat outposts, the required skill set and institutional knowledge have atrophied.

Successful BSA operations develop during the planning process, where rehearsed operations set conditions that lead to structured occupation of a BSA site after a tactical road march. After occupation, the BSB must develop a base defense plan that secures and protects the BSA support activities during decisive action operations. You cannot support if you cannot defend and, thus, both BSA operations and defense must be taken into consideration from the beginning of the BSA site-selection process, through occupation execution, and then refined as conditions change.



**Figure 10-1. Aerial view of a BSA at the NTC with recommended dispersion of assets.**

#### **Planning: Setting the Conditions**

During occupation planning, the staff must consider the proposed BSA sites in relation to mission, enemy, terrain and weather, troops and support available — time available and civil considerations (METT-TC) in order to recommend a defendable location to the battalion commander while ensuring that the BSA footprint enables support operations. For example, while the size of a BSA may prevent it from being completely hidden from observation, the

intelligence preparation of the battlefield (IPB) can find areas that may conceal the BSA location from possible enemy avenues of approach and population centers. IPB can assist in identifying field of view and possible locations for observation posts (OPs). Defense is only half the equation for the BSB staff to consider in site selection for the BSA. While sustainment operations must be protected, the BSA must be established to support the activities, as well.

**GOLDMINER TEAM**

**Defend the Brigade Support Area**

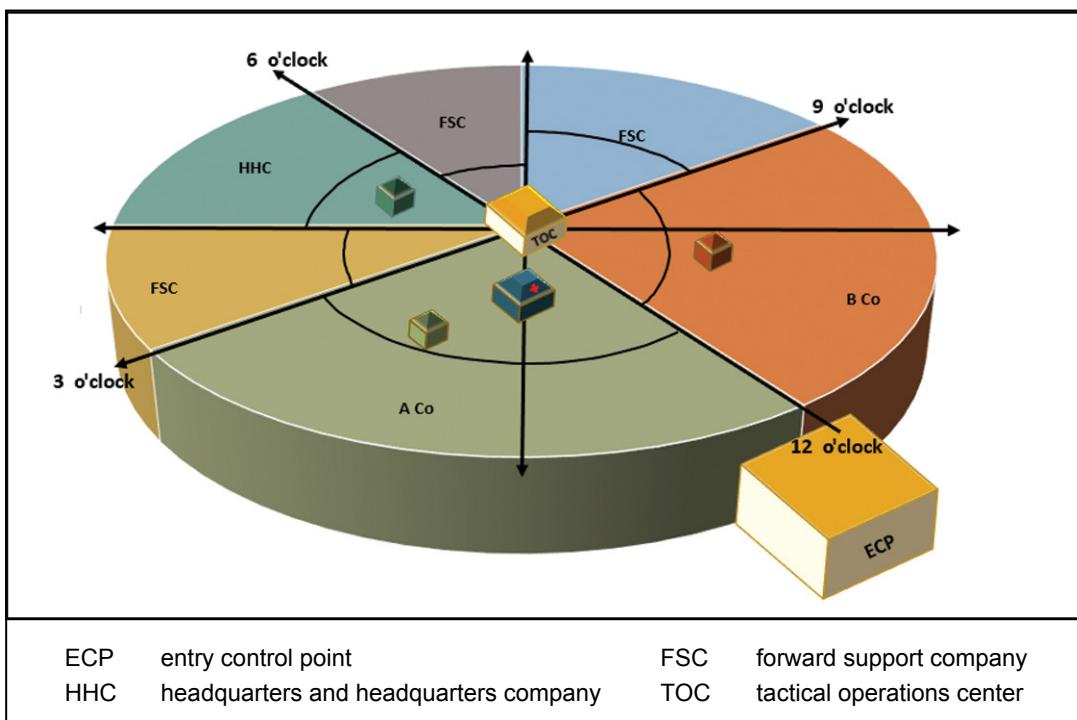


- Establish an effective BSA defense against a Level II threat.
- Develop the BSA layout using METT-TC factors.
- Assign all tenant units a sector.
- Tie in tenant units with established and properly constructed fighting positions, concertina wire obstacles, sector sketches, and intersecting fires.
- Ensure all elements in or transiting the BSA assist in defending the perimeter.
- Develop a BSA defensive plan that shows unit protection responsibilities, locations of mines and obstacles, planned indirect fire coverage, OP/LPs, patrol routes, and positions of automatic weapons.
- Ensure defensive positions are involved in threat analysis and are briefed on intelligence gathering requirements.
- Train and use a quick reaction force.
- Ensure effective communications with guards on perimeter.
- Integrate the use of enablers in the base defense plan (fires, TRPs, engineer, MPs, etc.).
- Ensure the final base defense plan, and any changes to the plan, are disseminated to all tenant units on the BSA.

**Figure 10-2. BSA defense considerations.**

While it can be more difficult to defend a large BSA, some of the largest convoys on the main and alternate supply routes are sustainment convoys. Identification of road networks to, from, and inside the BSA promotes ease of maneuver of the tenant units inside the BSA and units moving to and from the BSA. During planning and site selection, staff must look to establish a BSA that has sufficient area to conduct ammunition transfer holding point (ATHP) operations, fueling missions, supply support activity operations, staging areas for convoys, and medical evacuation (MEDEVAC) to the Role II medical facility. These areas should be large enough to support operations on the BSA that are conducted by the BSB units as well as both supported forward support companies and the supporting combat sustainment support battalion. In addition to calculating space for vehicle operations, the staff must consider space required for the incorporation of aviation assets and the required helicopter landing zones to facilitate aerial resupply and air MEDEVAC operations. Proper planning and staff work can minimize congestion on the BSA as occupation takes place and thus prevent increases in time on station, negative impacts to the defense execution, and increases in safety risks. Once a site is determined, the next step — building the BSA — takes place during occupation of the BSA.

## Occupation and Priorities of Work



**Figure 10-3. Example of a BSA occupation reference diagram.**

Occupation of the BSA is an organized and thoroughly planned action. This process begins with the occupation of the quartering party. The purpose of the quartering party is to verify site selection of the BSA and make limited preparations for receiving the rest of the organization. The quartering party does initial chemical, biological, radiological, nuclear, and explosive (CBRNE) sweeps and security sweeps of the BSA. Initial communications can be established by the quartering party to begin the transfer of mission command from the tactical assembly area/intermediate staging base to the new BSA. The quartering party then establishes tenant areas of responsibility on the BSA and makes changes in the defense concept as needed. The quartering party is key to the initial execution. This is also the first opportunity to have all eyes on the terrain and make adjustments to the BSA and defense as needed.

After the quartering party, the other elements of the BSA are tactically divided into serials to conduct the tactical road march. These movements are normally divided into the advanced echelon, main body (number of main body movements can differ by organizational planning), and finally, a trail party. Staff planning must determine through the military decisionmaking process (MDMP) when elements of the organization move to occupy the BSA. For example, through planning and coordination of the support operations officer and operations officer (S-3), it must be determined when essential logistical platforms must move and occupy to enable support operations to begin at the BSA. These movements must all translate into support of the maneuver plan and support the BCT mission. Determining when the BSA achieves initial operational capacity versus full operational capacity is essential in planning the concept of support and must be communicated across the BCT.

A technique that has been successful at the NTC to occupy the BSA is the clock methodology (see Figure 10-3). Using this method, the entry control point (ECP), the directed point where all elements enter the BSA, becomes the first point of reference. Drawing a straight line from the

ECP through the battalion tactical operations center (BN TOC) and out the perimeter of the BSA creates a “12 o’clock” at the ECP, a center of the clock at the BN TOC, and a “6 o’clock” at the opposite side of the BSA perimeter. From this point, the perimeter of the BSA can be divided according to relative combat strength of the tenant units.

The BSA defense plan takes fruition during all phases of occupation of the BSA site. One of the most important pieces of the initial base defense plan is the emplacement of the BSA ECP. The ECP maintains positive communications with the mission command element at the BSA and provides early warning of possible enemy threats traveling along high-speed avenues of approach. The ECP should be well-fortified against possible attack. Soldiers occupying the ECP should be trained in ECP operations and areas such as searching of vehicles, detaining individuals, intelligence gathering, etc. Many times the ECP is the first element to come in contact with the enemy and is the first in the line of defense.



**Figure 10-4. Supporting fires (incorporation into BSA defense plan).**

The BSA occupation must be a well-rehearsed operation, and all Soldiers arriving at the BSA should have an understood task and purpose. Unit standard operating procedures (SOPs) should establish the priorities of work for all Soldiers during the occupation and establishment of the BSA. As with establishing any assembly area, the first priority of work is security. Some of the tasks associated with security establishment are emplacing weapon systems, establishing communications, designating final protective fires and final protective lines, emplacing obstacles and mines, and building fighting positions. For sustainers on the BSA, additional considerations must be incorporated into the priorities of work, such as building a berm for fuel assets and the ammunition in the ATHP, identifying supply evacuation routes, and establishing decontamination sites. Once the perimeter defense is established and supplies are received and ready for distribution, rest and chow plans can be prepared. Without published, enforced, and rehearsed priorities of work, occupation is frustrated and requires unnecessary time before full operations begin.

Priorities of Work	Time (NLT)
Security (minimum of 25%)	Immediate
Position LPs/OPs	+2 hours
Establish communications (higher/lower)	+2 hours
Emplace crew-served weapons	+2 hours
Complete range cards/sector sketches	+6 hours
Prepare defensive positions	+8 hours
Camouflage positions and equipment	+10 hours
Construct TOC wire	+10 hours
Select and prepare alternate and supplementary fighting positions	+14 hours
Establish unit operations	+15 hours
Establish sleep areas	+15 hours
Conduct maintenance operations	+16 hours
Conduct personal hygiene	+18 hours
Chow	+19 hours
Rest	+20 hours
<i>*Example list of priorities of work when occupying the BSA</i>	
BSA: brigade support area	LP: listening post
OP: observation post	TOC: tactical operations center

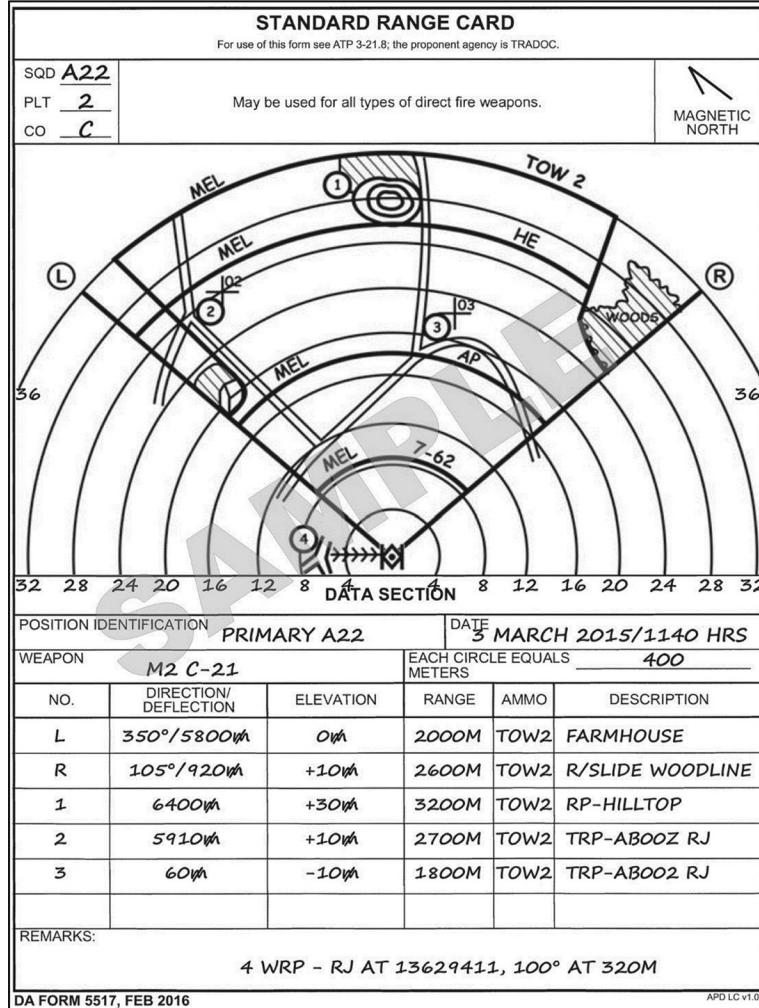
**Figure 10-5. Priorities of work example.**

### Individual Soldier Skills Building Collective Tasks

As an initial security posture is established and fighting positions are developed, companies are given areas of responsibility that can be divided into platoon, squad, and section areas and finally assigned to fighting positions. In this phase of building the defense, individual Soldier skills are used. Construct fighting positions to the standard established in the unit SOP. Ensure that fighting positions are mutually supportive with interlocking fields of fire. Emplace obstacles to create engagement areas (EAs) where the unit plans to employ its most casualty-producing weapon systems to engage the enemy. The seven steps of EA development, found in Field Manual (FM) 3-21.10, *The Infantry Rifle Company* (Chapter 5), are:

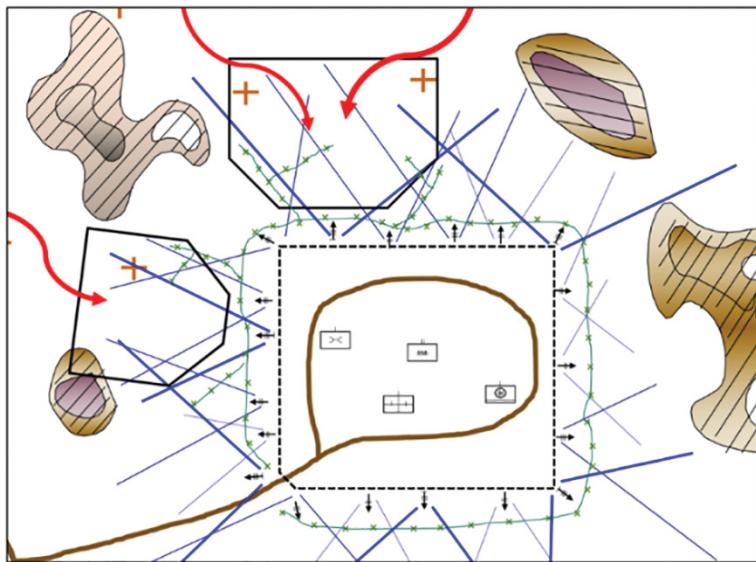
- Identify all likely enemy avenues of approach.
- Determine likely enemy schemes of maneuver.
- Determine where to kill the enemy.
- Emplace weapons systems.
- Plan and integrate obstacles.
- Plan and integrate indirect fires.
- Rehearse the execution of operations in the EA.

Developing the initial security posture should be the first effort of all units on the BSA. Only when fighting positions and security have been inspected and approved should units move on to other priorities of work. Leaders must be involved in this process and ensure that all actions are being conducted to standard. Range cards for fighting positions (crew-served weapons and individual weapon positions) must be developed to standard, which fosters situational understanding of the terrain the BSA occupies at all levels.



**Figure 10-6. Example of a completed range card.**  
(Source: ATP 3-21.8, *Infantry Platoon and Squad*, 23 AUG 2016)

Range cards from fighting positions are compiled to build sector sketches up to a complete company sector sketch. All companies provide their sector sketches to the BSB S-3. These sector sketches are compiled to give an overall picture of the BSA perimeter defense and create a BSA sector sketch that can be used in directing efforts during battle drill execution.



**Figure 10-7. Example of a BSA defense sketch.**

### Integration and Synchronization of Defense Enablers

With a complete picture of the initial defense perimeter, the battalion S-3 can further develop the base defense plan with the battalion, staff, and other supporting units. A quick reaction force (QRF) should be established and fall under the command and control of the S-3 battle captain. The QRF is used to provide reinforcing fire support and capability to the base defense plan during battle drill execution at any location where the S-3/battle captain sees it is needed. It is imperative that the mission authority of the QRF is established and clear and that any battle drill rehearsals conducted include participation from the QRF.

Target reference points (TRPs) are easily recognizable on the ground, can be either natural or manmade, and are used to control direct or indirect fires. The TRPs should be placed where fighting positions or the BSB S-3 anticipate enemy contact and call for fire to suppress the enemy. Once identified, the TRPs are confirmed, coordinated with the BCT fires cell, and FA battalion for support.

OP locations can be identified and manned with intelligence reporting requirements that have been developed through synchronization with the battalion S-2. These priority intelligence requirements are distributed to all defensive positions as well. De-briefs should be conducted at the end of guard shifts to provide intelligence feedback to the battalion S-2. Other options leveraged to provide intelligence and build defense capabilities are intelligence collection assets in the form of Raven operations or coordination with aviation assets to gather intelligence. All these things allow the battalion commander to see the base defense and make adjustments to the plan as required.



**Figure 10-8. Conducting intelligence, surveillance, and reconnaissance operations with a Raven.**

### A Fluid Plan in a Changing Operational Environment

Support activities conducted in the BSA can either be the force behind the brigade that extends operational reach or it can be the anchor that holds the brigade back in creating forward momentum in its operations. BSAs must maintain the agility to respond to the needs of the formation and must be mobile and flexible to move as required by the tempo of the brigade.

As conditions change in the area of operations and on the BSA, the shape and perimeter as well as the base defense plan must be flexible and adjust. When the number and composition of tenant units on the BSA change, the BSA defense plan changes. The adjustments must be communicated throughout the formation to ensure shared understanding. Defense of the BSA must be rehearsed just as any battle drill. It is the responsibility of leaders to ensure that Soldiers know and understand how individual efforts support the defense plan. All application of a unit's defense plan must be captured and continuously refined in an SOP.

As units become more proficient in defense of the BSA and its internal operations, BSBs and their subordinate units become better prepared to extend operational reach of the BCT by providing coordinated and synchronized sustainment.

## Chapter 11

### Engineer Support to the Offense: The Attack

#### CPT Robert Howell

#### **Introduction**

The U.S. Army operating concept challenges commanders and staff at all levels to develop the “ability to operate dispersed over wide areas … while possessing the mobility to concentrate rapidly” for current and future operations.<sup>1</sup> Engineers, both general and combat, enable freedom of movement and maneuver by providing multiple options for mobility and counter-mobility. Engineers recommend and execute these tasks each month at the National Training Center (NTC) within a decisive action training environment.

This chapter highlights persistent observations at NTC from engineer support to the attack as brigade combat teams (BCTs) face an opposing force (OPFOR) in a deliberate defense. The attack, versus movement to contact, generally requires more planning and preparation on behalf of engineer commanders and staff, which affords better insight into their strengths and weaknesses. Persistent observations are presented here from engineer support to the attack observed from three types of BCTs: armor, Stryker, and infantry at the NTC. The following observations are based on the activities of the operations process: plan, prepare, and execute.

#### **Planning**

Engineer support for an attack begins with planning during a preceding phase of the operation, usually a movement to contact or transition from the defense. The brigade engineer (brigade engineer battalion [BEB] commander) is responsible for the effective integration and prioritization of engineer effort to achieve the brigade commander’s intent.<sup>2</sup> Often, the partitioning of engineer assets is well-timed and effectively supports the brigade scheme of maneuver. Habitual relationships (successful in four of the last five rotations) assist greatly with enabler integration.

Engineers are task-organized within the main body of the combined arms formation. Assault, breach, and support forces are determined early within the planning cycle. Unfortunately, after combined arms teams are formed, maneuver and engineer battalions generally lack concerted effort in developing and executing systems to identify the location and extent of obstacles, possible breach sites, and potential enemy engagement areas. Though organic BCT reconnaissance assets are commonly exploited in this effort, constructive or live Joint Surveillance and Target Attack Radar Systems and/or National Geospatial-Intelligence Agency products rarely make it to engineer company commanders on the ground. Over the past five rotations, organic BCT unmanned aircraft systems and aviation assets frequently identified enemy obstacles in the disruption zone (an area OPFOR designates to begin the attack on the enemy), but only occasionally identified those in the battle zone (the engagement area and position of the OPFOR main defense force<sup>3</sup>) and relayed this information to task forces.

Engineer reconnaissance teams (ERTs) are commonly identified before BCTs arrive at the NTC. ERTs generally integrate with their supported scout unit prior to the beginning of the rotation and remain attached throughout the exercise. Effective units plan to leverage ERTs to collect information on enemy engineers and obstacle efforts during the attack. The information collected by ERTs at NTC enables engineer commanders and staff to prioritize the allocation of breaching assets during the planning process. Commanders must incorporate ERTs as early as possible because these teams are harvested from within the BEB.

Maneuver battalions commonly identify zones (disruption, battle, and support) in accordance with enemy doctrine, but rarely graduate into developing an effective enemy situation template that allows confirmation of the enemy obstacle effort. Enemy obstacle identification during the attack ranked lower than identification of enemy defensive positions for intelligence collection in three of the last five rotations. Equipped with the dimensions of obstacles, commanders are better able to arrange breaching assets prior to crossing the line of departure. In addition, engineer planners at battalion and brigade levels seldom incorporate enemy capabilities and planning factors to anticipate potential obstacle efforts, and render an ineffective event template.

Recently, in four out of the five last rotations, maneuver commanders breached obstacles in the disruption zone, but bypassed those within the battle zone to maintain tempo. FM 3-90-1, *Offense and Defense, Volume 1*, 22 MAR 2013 (page 33), specifies that in an attempt to enable mobility, a force “bypasses existing obstacles and minefields identified before starting the offensive task instead of breaching them whenever possible.” Mobility operations doctrine further expands the consequences of bypassing to include maneuvering into an enemy engagement area.

Through post-mission analysis and after action reviews, units realize that bypassing obstacles within the battle zone can cause a piecemeal attrition of friendly forces as they are unable to gain fire superiority entering the OPFOR engagement area. Successful units often plan to conduct a hasty or in-stride breach to achieve a concentrated combined arms force through enemy obstacles after considering the second- and third-order effects of bypassing an obstacle in the battle zone. Doctrine in Army Techniques Publication 3-90.4, *Combined Arms Mobility*, reinforces this: “The force bypasses existing obstacles that are identified before starting the offense instead of breaching them, when possible. However, this must be done with caution because it might give the enemy an advantage.”

## **Preparing**

Order generation falls short of the “1/3-2/3 Rule” for planning, but still provides ample time for preparing for the upcoming mission. Engineers are task-organized and effectively integrated into maneuver battalions to support an attack, enabling collaborative planning and situational understanding at echelon. Engineer Class IV (e.g., concertina wire) and Class V (e.g., mine clearing line charge [MICLIC] and demolition charges) items frequently arrive within time to enable successful preparation for offensive operations. Sustainment systems from the BEB are well-developed and practiced by the end of the rotation. Many BEBs maintain an accurate engineer common operational picture (COP) during offensive operations. The BEB receives updates from engineer commanders across the brigade area of operations. These updates assist in repositioning engineer combat power in the event an adjacent maneuver battalion requires additional support to breach an obstacle.

The most significant step in preparing to execute an attack is the combined arms rehearsal (CAR). These rehearsals are often conducted at NTC, but with varying degrees of effectiveness. Maneuver battalions, if preparing to conduct a hasty or deliberate breach, occasionally rehearse most of the fundamental steps of breaching during their CAR, to include the marking of the breach: suppress, obscure, secure, reduce, and assault. Engineers often perish before arriving to the breach as a result of inadequate planned or rehearsed suppression of enemy direct fire.

Maneuver commanders often select a maneuver company commander from the battalion to serve as the breach force commander. Engineer company commanders, whether breach force commander or not, prepare their organizations for the attack by ensuring the conduct of prioritized rehearsals with the maneuver element their platoons support.

Successful units at the NTC rehearse hasty (in-stride) breaches to prepare for OPFOR emplacement of situational obstacles (e.g., artillery delivered scatterable mines) along friendly avenues of approach. A key to success in this type of breach is rehearsing and understanding engineer capabilities to include MICLIC platforms, available reloads, and positions of engineer assets during the attack. Rehearsals are an invaluable key to success for both maneuver and engineer units, as rehearsals foster shared understanding of capabilities.

## **Execution**

Effective engineer units are able to reposition breaching assets rapidly to maintain momentum. Communication often is strained during a battle, causing confusion in relaying enemy obstacle descriptions and depth to engineer units. ERTs significantly reduce this confusion and enable commanders to make informed decisions on the allocation of breach assets, as ERTs have a vested interest and experience with obstacle identification. In addition, ERTs traditionally have a relationship with the maneuver and engineer units to which they relay obstacle reports. Obstacle descriptions collected during a fight are rarely accurate, as friendly units are often under direct and indirect fire. Descriptions of obstacles need not be perfect, but must provide commanders enough detail to elect the appropriate breaching asset. Successful units preserve, when possible, breaching assets until absolutely necessary.

Lane locations created by engineers through obstacles and minefields are often collected and disseminated across the brigade. This information assists the BEB and maneuver battalions in developing a COP that enables situational awareness at the company and troop level. Battalion commanders continually monitor, assess, and adjust units based on the progress and completion of the breach.

Units fight to suppress the far-side objective during hasty and deliberate breaches at the NTC. Effective organizations follow direct fire control measures developed while planning and preparing for the attack to achieve echeloning of fires during maneuver to and beyond the breach. Engineer breaching assets are high-payoff targets for the OPFOR, and are usually targeted if the point of breach is not secure prior to reduction efforts.

Engineers exhibit sound and well-rehearsed actions during the reduction of obstacles at the NTC. The lane marking systems (LMS) on both the engineer squad vehicle and assault breacher vehicle commonly are used. Lanes marked with the LMS are difficult to identify by M1 Abrams operators if marked on the left-hand side. Lead assault elements must familiarize and rehearse their brigade marking standard to ensure safe passage through the breach lane.

## **Conclusion**

Collaborative planning and preparation to support an attack are essential for engineer platoons and companies. The ability of a maneuver unit to concentrate rapidly often depends on the mobility enabled by engineers. Engineer support to the attack at the NTC is a complex task that requires focused attention by commanders at all levels. The persistent observations presented in this chapter denote areas engineer units must sustain or improve upon to meet the challenges the U.S. Army and our nation may face in the future.

## **Endnotes**

1. TRADOC Pamphlet 525-3-1, *The U.S. Army Operating Concept: "Win in a Complex World,"* Preface, page iii, 31 OCT 2014.
2. ATP 3-34.22, *Engineer Operations-Brigade Combat Team and Below*, Chapter 1, page 2, 5 DEC 2014.
3. FM 7-100.1, *Opposing Force Operations*, 27 DEC 2004.



## Chapter 12

### The Optimal Employment of the Forward Support Company in Decisive Action

**LTC Brent Coryell and CPT Christopher Devenport**

**Problem:** In brigade combat team (BCT) decisive action (DA) operations, many forward support companies (FSCs) are not providing maximum operational reach and optimal logistics support because they are not effectively organized across all sustainment echelons.

**Main Point:** Task organizing the leadership and capabilities of FSCs at the proper echelon fully extends the operational reach of the BCT and reduces immediate resupply operations.

#### Introduction

The brigade support battalion (BSB) maintains responsive (proactive vs. reactive) support by echeloning sustainment capability. Often, units are reactive because they do not prepare a carefully planned logistics estimate of the tactical operation in order to align sustainment capabilities against the requirements of the operation. Proactive BCT sustainment begins with a thorough logistic estimate and logistics task organization (LTO) that optimally positions the BSB and FSC sustainment assets among the company/battery/troop, the combat trains, the field trains, and the brigade support area (BSA) (see Figure 12-1, page 71). This chapter begins with a review of the FSC design, then provides recommendations regarding effective FSC employment, and lastly highlights contemporary challenges with FSC mission command, distribution, and maintenance in a DA environment based on recent National Training Center (NTC) observer-coach/trainer (OC/T) observations.

#### Forward Support Company Design

Although sustainment OC/Ts observe many FSC challenges in the DA fight, the structure of the FSC is sound; it is designed to be somewhat flexible and tailororable. The BSB's six organic FSCs provide direct support to each of the BCT maneuver battalions and squadrons, the field artillery battalion, and the brigade engineer battalion. Each FSC is organized differently to support a specific combined arms, infantry, Stryker, engineer, field artillery battalion, or cavalry squadron. FSCs provide field feeding, bulk fuel, general supply, ammunition, and field maintenance support. FSCs are organized to provide sustainment support where it is needed most — at the front.

In a DA conflict, as maneuver elements move forward and task organize, sustainment elements are designed with the mobility and flexibility to support. For example, if the cavalry squadron gets a platoon of tanks attached, it should get the maintainers, fuel, and distribution assets to go with them. Conceptually, each maneuver battalion can carry one unit basic load (UBL) of all commodities of supply, or one day of supply (DOS) on its combat systems. The FSC is designed to carry the battalion's second UBL/DOS, with the third residing with the BSB in the rear echelon of support at the BSA.

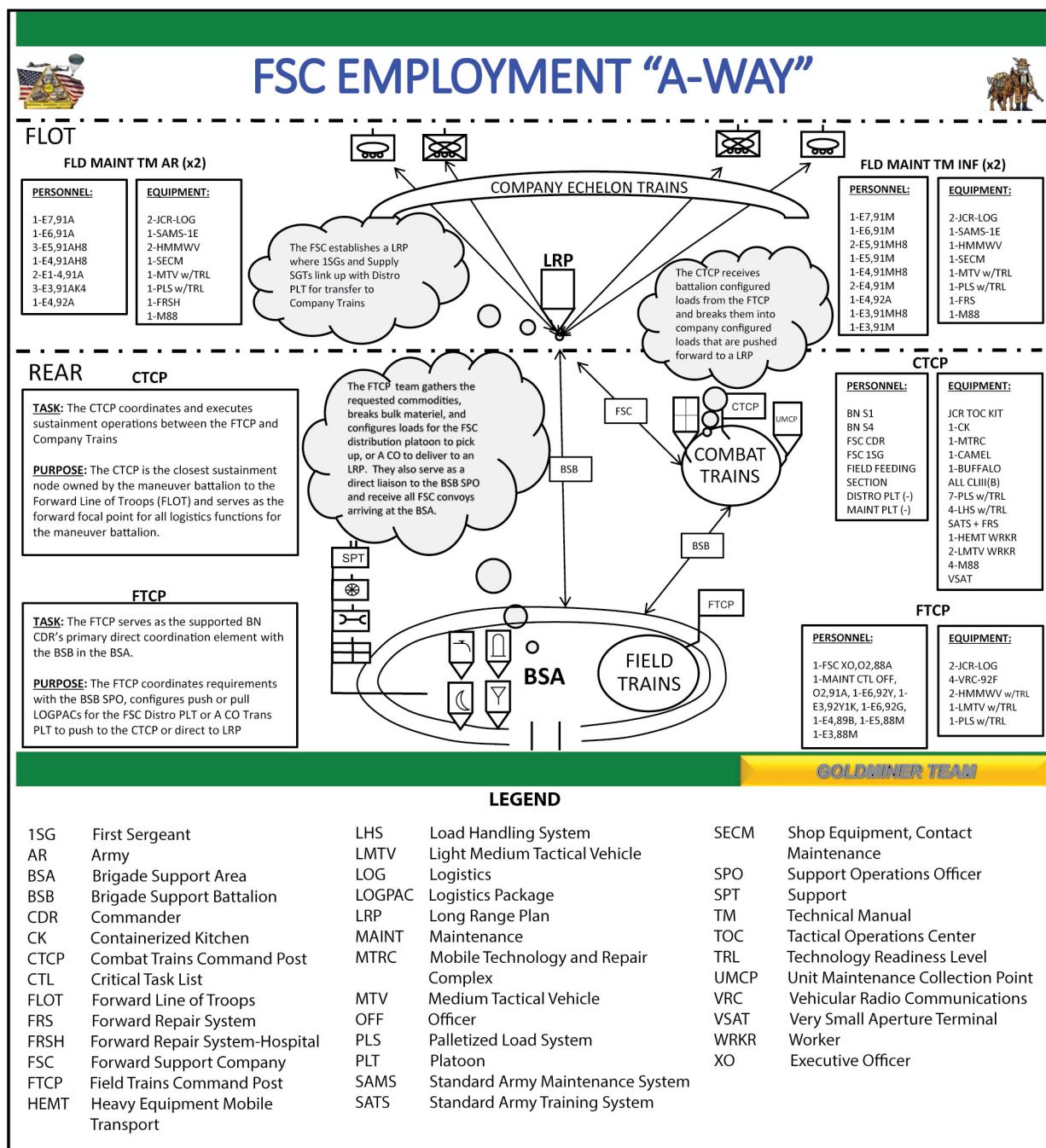
The FSCs are the link from the BSB to the maneuver battalions and are the organizations that provide the BCT the greatest flexibility for providing logistics support with assets at the field trains command post (FTCP) and combat trains command post (CTCP). Both the FTCP and the CTCP are mobile mission command posts (CPs) for logistics that execute supply break points to build combat-configured support packages for forward units. The design is sound; the challenge is determining how to best array these FSC personnel and assets based on what capabilities are required where and when.

### **Task-Organizing the Leadership and Logistics Capabilities of FSCs at the Proper Echelon**

As the Army focuses on training for DA operations, OC/Ts are observing some challenges associated with the optimal employment of the FSC. Sustainment is often desynchronized between the support echelons. Battalion distribution plans also are inconsistent in terms of the capability and Soldier skill set placed at the combat trains and field trains. Sustainment doctrine is intentionally not prescriptive to allow the BCT flexibility in the manning and arraying of sustainment forces between the FTCP, CTCP, and the company echelon or trains. Because there is no specified doctrinal solution, BCT sustainment planners devise numerous concepts of support to employ FSC assets at these different echelons; some work, and some do not. The concepts of support that do not work often cause emergency or immediate and unplanned resupply situations. Additionally, by using known requirements, capabilities, and consumption rates for all classes of supply, sustainment planners should produce a logistics estimate with an LTO that mitigates shortfalls and backhaul. This is an area where OC/Ts routinely observe that the Army is deficient from a training and education perspective.

BCT sustainment planners are generally challenged in conducting this anticipatory logistics analysis (forecasting math) and are not educated on the science of maneuver warfare and armored tactics. This lack of understanding and poor forecasting drive multiple unplanned resupply operations. To achieve proactive vs. reactive support, the sustainment planners must produce a continuously updated logistics estimate that takes into consideration the distance traveled by the maneuver task force, the time needed to travel those distances, and the consumption rates for all classes of supply. This log estimate will inform the concept of support that specifies the LTO of the FSC assets between the FTCP and the CTCP. Thorough logistics estimates and concepts of support assist in the emplacement of FSC assets optimally at these echelons.

## FSC Operations at the BSA and FTCP



**Figure 12-1. Task organizing the capabilities of the FSCs at the right echelon limits immediate resupply operations and fully extends the operational reach of the BCT.**

OC/Ts observe FSC capabilities at the BSA range from none to the entire FSC. Too little FSC representation at the FTCP presents a challenge, as does too much because BSA size becomes unmanageable and support is less responsive. FSCs do not have organic long-range communications assets outside of Joint Capabilities Release (JCR) and the very small aperture terminal (VSAT). Many times, the maneuver battalions feel like they have zero communication with the FTCP. They also do not have the weapons and personnel to secure themselves in a static

location and provide adequate convoy security. Therefore, OC/Ts recommend that the FTCP collocate with the BSA to benefit from and augment the security of the BSA, and to use the communication network established by the BSB. Locating the FTCP near the BSB CP allows for Warfighter Information Network-Tactical support from the BSB Command Post Network. FTCPs should maximize the full capability of the VSAT and combat service support information systems interface.

Regarding capabilities, the FSC should place in the FTCP personnel who can facilitate the resupply of Classes I, III, and V, and encourage the flow of Classes IV, VIII, and IX.

OC/Ts see successful use of the FSC executive officer (XO) to provide mission command at the FTCP while being in close proximity to the support operations officer (SPO) to coordinate emerging requirements. A food operations sergeant, ammunition handler, fuel handler, and supply specialist at the FTCP provide the expertise for commodity management needed from the BSB. Additional vehicle operators and supply specialists assist the distribution platoon of the Alpha Distribution Company (ADC) in accurately breaking and building configured loads for movement forward. FTCP equipment required in the BSA can be limited to mission command systems, general supply transport, troop transport, and a load-handling system/palletized load system to augment the ADC as needed.

A gun truck is also needed to assist in defending the FSC assigned sector of the BSA. FSC commodity teams at the FTCP prepare assets requested on the logistics status (LOGSTAT) report, which is validated in the logistics synchronization (LOGSYNC) meeting, and incorporated in the LOGSYNC matrix. The team gathers requested commodities, breaks bulk materiel, and configures loads for the FSC distribution platoon to pick up if supply point distribution is used, or for the ADC transportation platoon to deliver to an LRP if using unit distribution. The FTCP team receives and directs all FSC convoys arriving and departing the BSA and serves as a direct liaison to the BSB SPO.

### **FSC Operations at the CTCP**



**Figure 12-2. Flat rack exchange conducted at a CTCP.**

The CTCP is the closest sustainment node to the forward line of own troops (FLOT) commanded by the maneuver battalion, and it serves as the focal point for all logistics functions for the maneuver battalion. It doctrinally operates four to 12 kilometers behind the maneuver task force. Combat trains usually consist of elements of the battalion S-1, S-4, Role I aid station, the maintenance collection point (MCP), and the FSC distribution platoon. The CTCP usually stocks emergency Classes I, III, and V. The CTCP is a good location for the FSC commander (CDR), mainly because he needs flexibility to attend planning sessions with the battalion task force (BN TF) S-3 and XO, and this location is closer to the battalion CP, where they operate. The battalion S-4 or headquarters and headquarters company (HHC) CDR often serves as the CTCP officer-in-charge (OIC), and the maintenance control officer serves as the OIC for the MCP. The maintenance control sergeant, maintenance control technician, and the maintenance platoon leader/platoon sergeant also operate at the CTCP. The bulk of the FSC distribution platoon, maintenance control, field maintenance, and service and recovery sections reside at the CTCP for distribution and maintenance support; consequently, the distribution platoon leader and shop officer also should be at the CTCP. The distribution platoon located at the CTCP receives battalion-configured loads from the FTCP and BSA and breaks them into company-configured loads pushed forward on logistical packages (LOGPACs). The maintenance sections in the CTCP provide general support to the battalion at the MCP and report through the Standard Army Maintenance System-Enhanced (SAMS-E) at the FSC to the SAMS-E at the BSB.

### FSC Operations at the FLOT (Company Trains)



**Figure 12-3. Bulk fuel exchange from BSB assets to FSC assets.**

Forward of the CTCP, in the company trains, field maintenance teams (FMTs) are frequently collocated with supported maneuver companies to provide the companies the ability to quickly regenerate combat power. Each team is fielded with the forward repair system, specialized tools, military occupational specialties (MOSs), and recovery assets for the type of company they support. Mission command lies with the FMT senior mechanic, who uses JCR/JCR-logistics to communicate with the CTCP about vehicle faults and requirements for additional support. FMTs are the executors of the “fix-forward” concept to enable the BCT’s success in tactical operations.

Moving toward the FLOT with sustainment assets must be rehearsed and well understood by both the FSC elements and the maneuver company CDRs. Maneuver first sergeants and company supply sergeants are critical in synchronizing the movement of sustainment assets and commodities to the warfighter on the forward line.

FSC Challenges						
Forecasting and Conducting Logistics Estimates	Terms of Reference WRT command and support relationship between the BSB and Maneuver BN	Determining the Optimal FTCP Composition at the BSA	Determining the Optimal CTCP Composition and Function	Overuse of FSC Distribution PLT and undersuse of Alpha Company Transportation PLT	Technical Abilities of FSC Mechanics (Not Fixing Forward) Evacuating repairs to FMC in BSB	TF S4 and FSC CDR Friction (Roles and Responsibilities)
LEGEND						
BSA brigade support area	CTCP combat trains command post	FTCP field trains command post				
BSB brigade support battalion	FMC field maintenance company	PLT platoon				
CDR commander	FSC forward support company	TF task force				

**Figure 12-4. As the Army moves forward training for DA operations, NTC OC/Ts are observing challenges associated with the optimal employment of the FSC.**

## Distribution

Often, FSC distribution platoons are overused, while the transportation platoon from the ADC in the BSB is underused. The FSC distribution platoon regularly covers long distances and runs multiple LOGPACs daily to support their battalions. The distribution platoon frequently operates between the field trains and combat trains, breaking loads and then pushing forward to the company trains. Using the BSB transportation platoon to regularly move commodities between the FTCP and CTCP can help offset this imbalance.

The ADC transportation platoon can support multiple FSCs and CTCPs through synchronized and rehearsed logistics release point (LRP) operations to help balance the use of limited distribution assets. LRP s are an excellent way to extend operational reach, but they are seldom used during an NTC DA rotation. Modular system swaps (i.e., flat-rack, Hippo [water supply tank], and modular fuel system tank exchange) are additional useful techniques. These systems are designed to decrease sustainment asset time on station, thus increasing efficiency and extending operational reach. Units often are not observed exchanging these systems because of their fear of loss of property accountability and/or equipment damage. Also, FSCs that position all of their distribution capabilities with the FTCP in the BSA do not have the assets forward in the CTCP to conduct LRP operations with the ADC transportation platoon. Conversely, if all FSC distribution assets are at the CTCP, the FSC distribution platoon must return to the BSA to get supplies to push from the CTCP. An effective solution is meeting in the middle at an LRP. At the LRP, the first sergeants and supply sergeants link with the FSC distribution platoon or the ADC transportation platoon to conduct LOGPAC operations.

## Maintenance

NTC OC/Ts observe CDRs with low confidence in the technical abilities of FSC mechanics forward. In many cases, FSC mechanics are not fixing forward because they lack the necessary troubleshooting skills to identify faults. The underlying issue is that FMT mechanics are not getting the low-density specialty MOS training (maintenance training to repair radios, small arms, night vision devices, and ground support equipment are the main commodities) they need from the specialty technicians residing in the BSB shops. Thus, equipment is not being repaired forward. The BSB often pulls the forward mechanics in these specialties back to the BSB field maintenance company (FMC) so they are under the commodity warrant officer technician's supervision. In other cases, items are not repaired because the untrained forward FSC mechanics

have been re-missioned to do other things. Because these mechanics are incapable of doing their jobs, many maneuver CDRs use them outside of their MOS as unit armorers or orderly room clerks. The BSB SPO and maintenance officer, along with BN TF S-3s and XOs, could resolve this by publishing a training plan that develops the necessary technical skills in these maintainers to enable them to troubleshoot and fix equipment forward. Commodity (specialty) maintenance technicians assigned to the FMC should take an active role in conducting training and mentorship for low-density maintenance MOSs to develop the skills of Soldiers in the FSCs.

### **Mission Command**

There is often confusion in the delineation of duties between the battalion S-4 and FSC CDR. The maneuver battalion S-4 is the logistics planner for the battalion and is responsible for developing the battalion concept of support, which should be nested with the BCT concept of support. The FSC CDR is the executor of the missions derived from the concept of support.

Typically, a battalion assigns a pre-career-course first lieutenant (1LT) in the S-4 slot. According to the modified table of organization and equipment (MTOE), this slot is a post-career-course combined arms captain position. Often, the 1LT in the battalion S-4 slot is in his first staff position, is inexperienced in the military decisionmaking process, and does not understand the fundamentals of sustainment. This drives the maneuver battalion CDR directly to the FSC CDR, who is the senior and most experienced logistician in the task force, which often marginalizes the effectiveness of the battalion S-4. This creates risk in sustainment execution by shifting staff duties to a CDR. The FSC CDR should focus on commanding the FSC and executing the support mission. The BSB and maneuver battalion CDRs need to ensure that the duties of the FSC CDR and battalion S-4 are spelled out and are functional; if there is confusion on who is responsible for what, then the CDRs need to help delineate.

### **Conclusion**

BCT sustainment planners must clearly understand requirements derived from effective forecasts and the functions and capabilities of the FSCs in order to develop the battlefield geometry required to maximize the operational reach of the BCT. Optimal FSC asset emplacement in DA operations requires thorough staff analysis, complete understanding of FSC capabilities, and clearly defined personnel functions to support the tactical operation. Accurate and continuous logistics running estimates determine what is needed where and when on the battlefield.

The sustainment planners (with BSB CDR involvement) need to have the flexibility to move and adjust sustainment forces across the CTCP and FTCP, use LRPAs as required, and enforce the use of modular system exchanges to best support the BCT. The battalion S-4 ought to be used as the sustainment planner, with the FSC CDR used as the sustainment executor. BCT sustainment planners need to establish the right balance of distribution assets and methods between the FSC distribution platoon and the ADC BSB transportation platoon so that one or the other is not being overused or underused. Training and mentorship for low-density maintenance MOSs develop the skills of Soldiers in the FSCs. This prevents “pooling” of mechanics and evacuation of non-mission-capable equipment to the BSB FMC. Positioning the capabilities of the FSCs at the right echelon limits immediate resupply operations, fully extends the operational reach of the BCT, and provides proactive vs. reactive support.

### **Additional Material**

#### **Why FSCs Were Created**

The shift from forward support battalions (FSBs) and maintenance support teams (MSTs) to BSBs and FSCs started in 2003 with the 3rd Infantry Division as the Army transitioned to the modular BCT and the Army forces generation cycle. It can be argued that it actually started in

1999 at Fort Hood, TX, with the 4th Infantry Division and the Force XXI concept. The concept and creation of modular FSCs were certainly sound and made good sense because FSBs were creating ad hoc FSCs anyway. FSBs were routinely “attaching” MSTs to maneuver battalion support platoons and building them up with additional sustainment capability as needed. It was not uncommon for medical, water, fuel, and ammunition personnel and equipment to be removed from the FSB and attached to the MST supporting the maneuver battalion in accordance with the concept of support. Much of the FSC capabilities already resided in the HHCs of the maneuver. So, if units were building forward support capability anyway and had much of it already residing in the HHC, why not just make it permanent with an MTOE change? After all, the Army was on a force structure move to modularity to become more expeditionary, and the BSB and FSC construct fit this modular model.

Immediately after the BSBs and FSCs were structured and resourced, the Army went straight into the wars in Iraq and Afghanistan. The proverbial “building the airplane in flight” commenced as the Army of Excellence was restructured into modular BCTs with BSBs and FSCs. The Army moved from fighting a near-peer force during Operations Desert Shield/Desert Storm to combating a hybrid threat during Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF).

Years of conflict in OIF and OEF limited the BSB CDR influence over FSC training and employment. As the areas of operations (AOs) matured, the fast, expeditionary BSB and FSC became part of a forward operating base (FOB) infrastructure of logistics in a mature theater. Company elements moved between established nodes within the sustainment network and worked directly for the maneuver CDR running scheduled resupply missions based on steady-state operations. These relatively new companies were not employed per their flexible design, and the usefulness and uniqueness was in a network of sustainment nodes often run by contracted logistics support across the AO.

The BSB CDR did not require the flexibility of being able to leverage all of the organic sustainment assets and personnel in the steady-state operations of FOB-based logistics. The BSB CDR, in most cases, fell in on a system that only required him to replace people in kind with the unit they were relieving. There were many times when BSB CDRs did not need to conduct a detailed analysis of the problem when moving into theater because it was already defined. The FSCs could complete their mission without the oversight from the BSB CDR and only had to ensure support of their maneuver battalion CDR. Additionally, current BSB CDRs spent most of their company-grade time under main support battalions and FSBs. If they spent time as an FSC CDR, they may have only experienced the dysfunction of trying to apply an expeditionary concept of support to a steady-state construct. Now, as battalion CDRs, they yearn for what is familiar, and the last sustainment framework they remember being mostly functional was the Army of Excellence model.

### **Establish ‘Terms of Reference’ Between the BSB and FSC**

A good relationship between the BSB and the FSC starts in garrison and takes effort to maintain. The relationship is difficult because BSBs are assigned subordinate FSCs by MTOE, but most FSCs in the Army are under operational control and are almost entirely integrated with their supported battalions. There is a tendency for the FSCs to become “distanced” from the BSB, limiting BSB CDR influence and possibly undermining his authority as the senior logistician in the BCT. This is mainly due to a lack in understanding of command relationships vs. support relationships within the BCT.

The BSB CDR is the BCT senior logistician and is responsible for sustainment planning, coordination, integration, and synchronization for the brigade, regardless of FSC command

relationships. The task organization and command relationship of the FSCs require analysis of BCT operations and consensus of all CDRs while in garrison. With this in mind, the BSB CDR should establish a memorandum of agreement (MOA) that delineates roles and responsibilities and ensures support by the BCT CDR and fellow maneuver CDRs. This “terms of reference” document must clearly delineate who is responsible for what, while in garrison and in the field.

With only a few exceptions, FSCs receive the same support from their supported battalion as the supported battalion’s organic companies. The BSB CDR should have the authority (delegated from the BCT CDR) for logistics officer position management, while the BSB command sergeant major (CSM) should have the delegated authority for logistics noncommissioned officer (NCO) position management. Talent management and honest assessments of all subordinate leaders is critical in mission success and support flexibility.

Many BSB CDRs have a tendency to put their best logistics captains (who have completed the combined logistics captain’s career course) as CDRs in the FSCs. BSB CSMs do the same with senior NCOs. They accept risk with the BSB leader talent internally because they have more control to mentor less-experienced leaders. Talent should be dispersed proportionally between the BSB internal companies and the FSCs to facilitate accomplishment of the battalion mission as a whole.

The BSB CDR should make it a personal effort to professionally develop logistics 1LTs and grow the next generation of logisticians. BSB CDRs should rotate logistics 1LTs among supply, maintenance, and transportation jobs with the final year ending as an XO or in a staff position. 2LTs should do an MOS-specific job first whenever possible, but position openings are not always lined up with new arrivals. The goal should be for all logistics lieutenants to have three job assignments during their tenure with the BCT and have time in the BSB as well as the FSC. This will make them well rounded early, and ultimately better-prepared, multifunctional logistics CPTs.

### **The BSB and FSCs Must Routinely Train Together**

The BSB should incorporate the FSCs into all battalion-level field exercises so that the support relationships remain intact. BSBs should establish the BSA with its FSCs at least twice a year. They should practice the complexity of tactical distribution, practice sustainment synchronization at echelon, practice the science of control by establishing the FTCP and CTCP, and define what equipment and skill sets should reside in both locations (to include which communications systems are to be used at each location).

The BSB CDR and CSM should establish and validate the sustainment tactical standard operating procedures to cover all echelons of sustainment in the BCT. The BSB should provide resourced training packages for all sustainment Soldiers, oversee their professional development with mentorship, and train all junior sustainment leaders.

The BSB CDR and CSM can host a sustainment university that meets monthly and covers sustainment functions such as LOGSTAT reporting and conducting logistics estimates. Another training event that works for logistics LTs is a stakes competition that provides the LTs an opportunity to compete for the position of “Top Logistics Lieutenant” against all other logistics LTs in the BCT. Have logistics NCOs (E-7) evaluate the lieutenants so it is a training event for the NCOs, as well. Have the lieutenants participate in 10 to 15 events ranging from setting up an OE-254, conducting preventive maintenance checks and services on a high mobility multipurpose wheeled vehicle, to turning on and distributing fuel from a heavy expanded mobility tactical truck fueler. This competition tests mental toughness, physical fitness, technical and tactical proficiency, and most importantly, builds camaraderie among the logistics LTs and improves their skills.

While in garrison, do not allow FSCs to pick up fuel from the main post. Make the ADC issue it from the motor pool. This makes fuel handlers in the FSCs develop working relationships with their fellow fuel handlers in the BSB. The BCT should set up all of the VSATs and conduct daily tactical file transfer protocol between logistics information systems. It is easy to get tied to the Network Enterprise Center, which is not training as we fight. Also, have all of the commodity maintenance technicians in the BSB FMC incorporate all of the low-density MOSs into monthly “fenced” MOS training.

Training between the BSB and the FSCs is essential, and takes coordinated efforts and agreements between CDRs. Build the BSB and FSC relationship in garrison with an MOA between CDRs that clearly outlines terms of reference defining who is responsible for what. Then, most importantly, BSB and FSCs must train together.

## Chapter 13

### ‘Where’s My LOGCOP?’

#### **BCT S-4 vs. BSB Support Operations Officer in Anticipating Requirements**

#### **MAJ Matthew D. Meyer**

Within the sustainment warfighting function, Army Doctrine Reference Publication 4-0, *Sustainment* (page 3-4), states, “the sustainment staff’s role in synchronizing sustainment planning with operations is necessary to assist operational commanders and staffs set the conditions for what is in the realm of the possibility.” In order to synchronize the sustainment plan, the brigade combat team (BCT) logistics officer (S-4) and brigade support battalion (BSB) support operations officer (SPO) must understand their roles and responsibilities.

When these are clearly defined, the BCT S-4 and SPO can coordinate planning and execution of the brigade support mission. BCT S-4s and SPOs often struggle to identify their roles prior to arriving for a rotation at the National Training Center (NTC). As a result, they ultimately fail to identify who is responsible for which logistical function, how to ensure that everyone in the brigade knows who is doing what, and what they can do back at home station in order to prepare for a rotation at the NTC.

The first thing the BCT S-4 and SPO must do is to ensure that they doctrinally understand each other’s roles and responsibilities. Field Manual (FM) 3-96, *Brigade Combat Team*, 08 OCT 2015, can assist in identifying those roles.

S-4 responsibilities include, but are not limited to, the following:

- Developing the logistics plan to support BCT operations and determining support requirements necessary to sustain BCT operations.
- Coordinating support requirements with the division logistics staff officer on current and future support requirements and capabilities.
- Conducting logistics preparation of the battlefield.
- Managing the logistics status (LOGSTAT) report for the BCT.
- Monitoring and analyzing equipment readiness status of all BCT units.
- Planning transportation to support special transportation requirements such as casualty evacuation.
- Coordinating for all classes of supply, food preparation, water purification, mortuary affairs, aerial delivery, laundry, shower, and clothing/light textile repair (see FM 4-95, *Logistics Operations*, 01 APR 2014).
- Recommending sustainment priorities and controlled supply rates to the commander.
- Monitoring and enforcing the BCT command supply discipline program throughout all phases of the operation.
- Managing organizational and theater-provided equipment assigned to the BCT.
- Planning for inter-theater movement and deployment of BCT personnel and equipment.

SPO responsibilities include, but are not limited to, the following:

- Developing the concept of support and the distribution or logistics package plan.
- Coordinating external support requirements with the BCT S-4, division logistics staff officer, and supporting sustainment brigade.

- Planning, preparation, and oversight of logistics and Army Health System support tasks during BSB operations within the BCT area of operation.
- Maintaining a common operational picture for logistics within each formation and throughout the BCT to ensure timely delivery of required support.
- Coordinating support for all units assigned or attached to the BCT.
- Advising the BCT commander for aerial delivery support.
- Planning and coordinating orders published by the BCT operations staff officer (S-3) for execution by all subordinate BSB units, including the forward support company, during the performance of current operations and brigade support operations.
- Performing logistics preparation of the battlefield and advising the commander on the relationship of support requirements.
- Planning and monitoring support operations and making necessary adjustments to ensure that support requirements are met, and providing the status of the tracked systems and materiel required to update the BSB LOGSTAT.
- Providing centralized and integrated planning for all support operations within the BCT (structure varies by type of unit and generally includes transportation, maintenance, ammunition, Army Health Systems support, and distribution operations).
- Managing BCT maintenance readiness.
- Supervising the sustainment automation support management office.

Once the BCT S-4 and SPO understand each other's roles, they need to identify who will be responsible for managing, preparing, and leading the logistical reports and orders for the BCT. At the NTC, the following orders, reports, and meetings are expected to be produced: paragraph 4, Annex F, and concept of support (per phase); LOGSTAT; logistics common operational picture (LOGCOP) development; logistics synchronization (LOGSYNC) matrix; LOGSYNC and maintenance meetings. The S-4 and SPO should work together in the production of all of these items. However, each is responsible for leading specific ones. The BCT S-4 should produce the paragraph 4, Annex F, and the initial concept of support of the operations order (OPORD) for each phase. The BCT S-4 also is responsible for collecting the LOGSTAT from each battalion and submitting it to division. The SPO is responsible for taking the OPORD products produced by the BCT S-4 and developing a more concise and executable concept of support. Once the BCT S-4 has consolidated the BCT LOGSTAT, the SPO should produce the brigade's LOGCOP. The SPO also produces the LOGSYNC matrix and uses it to lead the LOGSYNC and maintenance meetings.

After the BCT S-4 and SPO have identified their responsibilities, they must ensure all participating personnel know who is the lead for each required action. The two primary means to distribute this information across the brigade are the OPORD and the LOGSYNC meeting. Including the reporting timelines, battle rhythms, and point of contact information is essential. Whether in the paragraph 4, Annex F, concept of support, or all three, the BCT S-4 is responsible for including this information. The SPO is responsible for communicating this information during the daily LOGSYNC meeting.

Now that the BCT S-4 and the SPO have worked their roles and ensured that everyone knows what they are responsible for, how do sustainers prepare for a rotation at the NTC while at home station? First, and foremost, units need to practice conducting all meetings and submitting reports at home station before coming to the NTC. Units that do not practice these meetings and reports

at home station often struggle or fail to incorporate them during a rotation. Next, the BCT S-4 and SPO ensure that the standards for each system of reporting (Battle Command Sustainment Support System/logistic response time, Joint Capabilities Release-Logistical, etc.) are enforced at home station in order to identify equipment shortages and personnel training requirements before coming to the NTC.

Finally, the BCT S-4 and SPO must ensure that the forward support company commanders and the battalion S-4s also conduct the same synchronization at their level. Once everyone understands all of the logistical responsibilities and the importance of synchronizing logistics at all echelons, the BCT can successfully execute its mission without worrying about whether the support is available.



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